43627

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS;

PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——*Virg.*

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MDCCCIV.

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AND PLACES OF GROWTH.

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Oct.r 1. 1800. Published by Jas Sowerby, London.

HYPERICUM Androsæmum.

Tutsan, or Park Leaves.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Capsule pulpy. Stem shrubby, compressed.

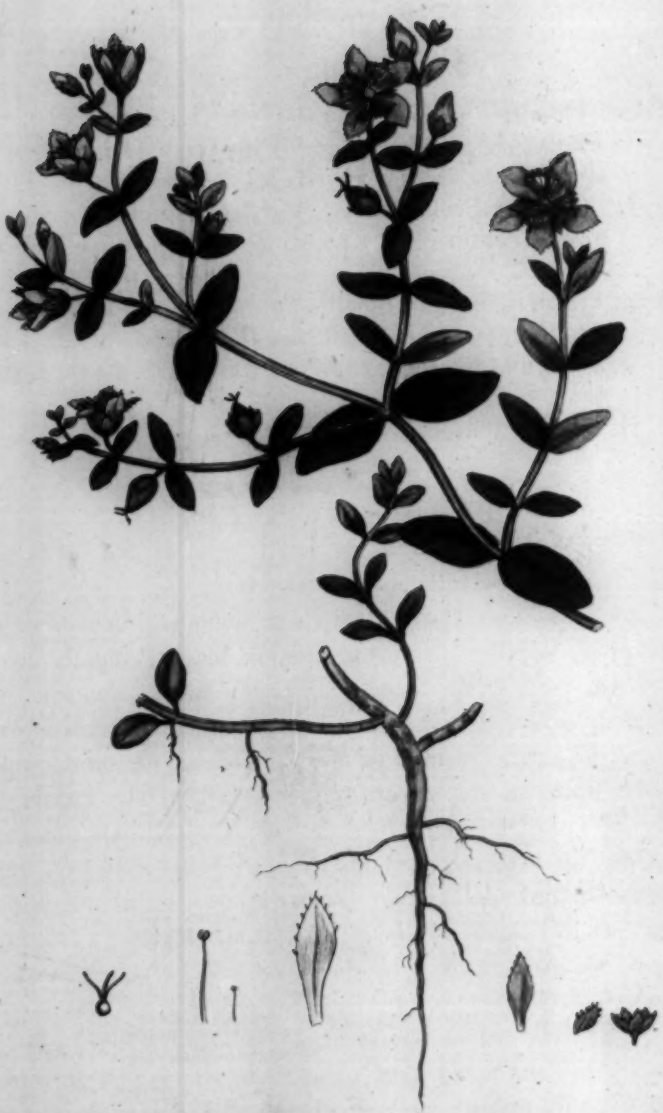
SYN. Hypericum Androsæmum. *Linn. Sp. Pl.* 1102. *Sm. Fl. Brit.* 800. *Huds.* 332. *With.* 663. *Hull.* 167. *Sibth.* 233. *Curt. Lond. fasc.* 3. *t.* 48. *Lightf.* 415.

H. maximum, Androsæmum vulgare dictum. *Raii Syn.* 343.

OUR largest wild species of *Hypericum*, the *Androsæmum*, is also one of the rarest, and seems to be more frequent in Norfolk than in other counties. About North Walsham, Wood Dalling, Costesy, and some other places, it is found growing plentifully in shady lanes, thickets and woods, flowering in July, and fruiting in the autumn. The Rev. Mr. Butt found it not uncommon in woods in Ireland.

The stem is woody and perennial, erect, repeatedly branched, leafy, quadrangular, but more or less compressed. Leaves opposite, sessile, widely spreading, ovate, or rather heart-shaped, entire, veiny, somewhat rigid, especially when old, smooth, as well as every other part of the plant. Panicles terminal, sessile, more or less accurately three-forked; their stalks quadrangular in the lower part, but above the bracteæ, which are small opposite and acute, they have 5 angles. All the angles are sharp and almost winged. Calyx of 5 ovate entire leaves, 2 of them smaller than the rest, all permanent, becoming larger, firmer, more spreading, and coloured, as the fruit advances toward maturity. Petals and stamina yellow. Styles 3, of the same colour, changing afterwards to purple. Fruit purplish black, elliptical, consisting of a pulpy capsule.

No glands adorn the flowers of this species. It is easily known by its shrubby stem, large flowers, and black fruit. When rubbed it has an aromatic scent. Curtis has well remarked that "neither Haller, Linnæus, Jacquin, Scopoli, nor Oeder enumerate it in their respective Floras."



Oct.1 1803 Published by Jas Sowerby, London.

HYPERICUM humifusum.

Trailing St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Flowers somewhat cymose. Stem compressed, prostrate. Leaves elliptical, smooth.

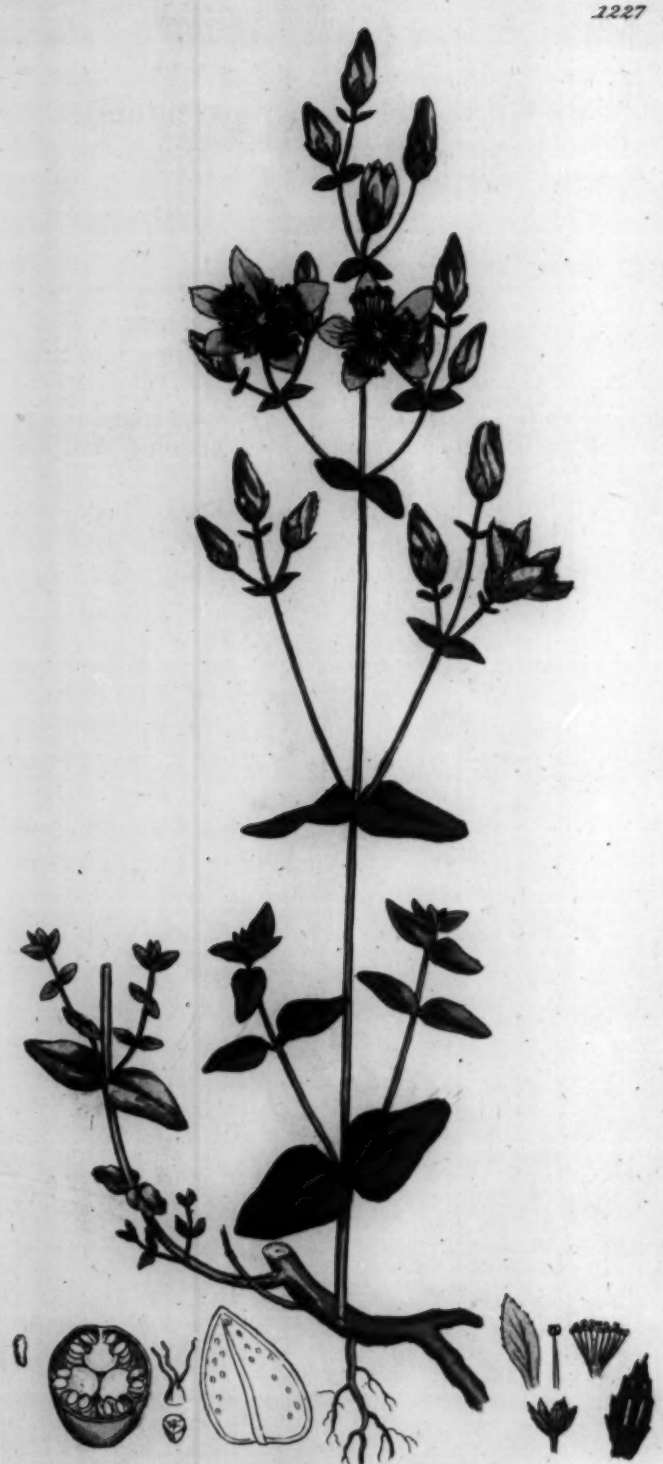
SYN. Hypericum humifusum. *Linn. Sp. Pl.* 1105. *Sm. Fl. Brit.* 803. *Huds.* 332. *With.* 665. *Hull.* 167. *Relh.* 295. *Sibth.* 233. *Abbot.* 165. *Curt. Lond. fasc.* 3. *t.* 50.

H. minus supinum. *Raii Syn.* 343.

FREQUENT in gravelly or sandy pastures and on boggy heaths, flowering from June to August.

Root perennial, fibrous. Herbage smooth. Stems several, prostrate, slender, leafy, varying in length, slightly compressed, more or less branched. Leaves sessile, opposite, elliptical, entire, dotted, of a thin membranous texture, and of a palish green, especially beneath. Flowers on short simple stalks from the upper part of the stem, generally forming a sort of forked corymbus. Their colour is a bright uniform yellow. The segments of the calyx are broad and leafy, their edges toothed with purple glands, as are also the margins of the petals. Stamina, styles and germen yellow. The fruit turns red as it ripens, and the lower leaves assume the same hue.

In a certain lemon-like scent, as well as its general colouring, this plant agrees most with *H. dubium* and *perforatum*; but its procumbent mode of growth, few flowers, and more leafy calyx, serve easily to distinguish it.



Oct. 1. 1803. Published by Jas. Sowerby. London.

HYPERICUM pulchrum.

Small upright St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

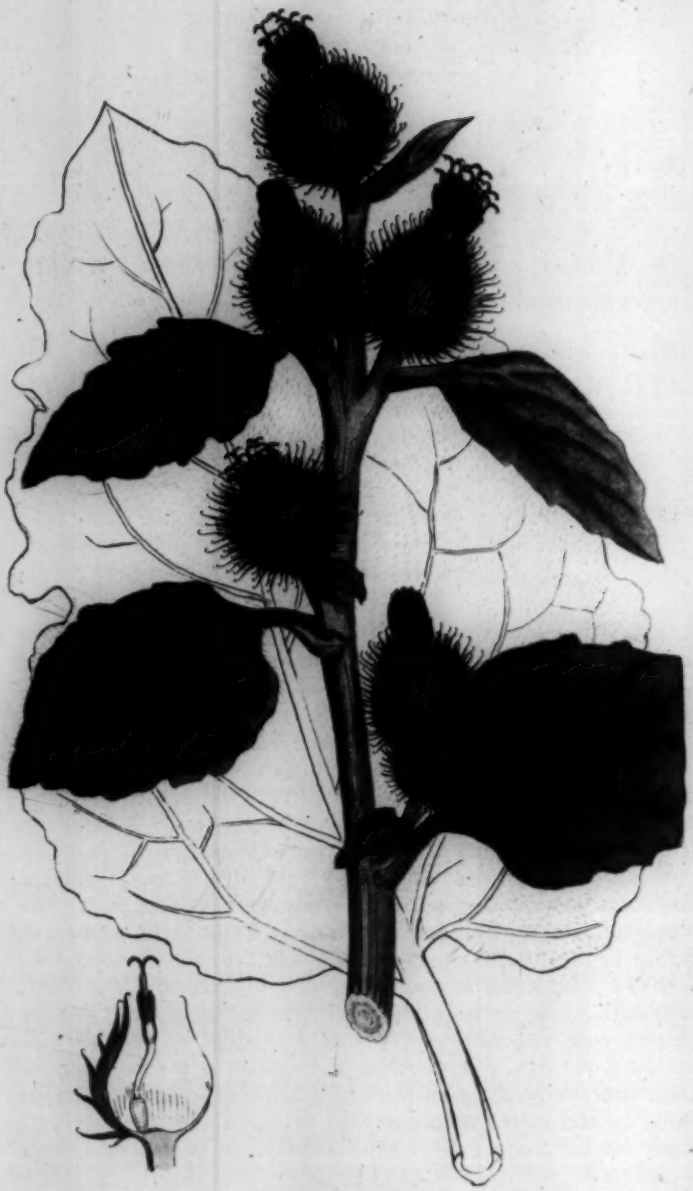
SPEC. CHAR. Styles three. Calyx with glandular serratures. Stem erect. Leaves clasping the stem, heart-shaped, smooth.

SYN. Hypericum pulchrum. *Linn. Sp. Pl.* 1106. *Sm. Fl. Brit.* 804. *Huds.* 332. *With.* 667. *Hull.* 168. *Relh.* 295. *Sibth.* 234. *Abbot.* 166. *Curt. Lond. fasc.* 1. *t.* 56. *Dicks. H. Sicc. fasc.* 16. 13.
H. pulchrum Tragi. *Raii Syn.* 342.

THIS, one of the most elegant of its genus, grows frequently among bushes on commons and heaths, either on a clay or gravelly soil, flowering in July, when its tall straight slender panicled stems, bearing numerous yellow buds tipped with red, intermixed with already expanded flowers, are no less conspicuous than beautiful.

The root is woody and perennial. Stem round. Whole plant smooth. Leaves convex, firm and rigid, dotted, dark-green above with a glaucous tinge, paler beneath; they are sessile, heart-shaped and entire, generally deflexed; the lowermost soon become perfectly red. The calyx-leaves are elliptical, toothed with dark glands, and furrowed. Petals of a golden yellow, externally tipped with scarlet; their edge glandular. Antheræ red; which contributes to enliven the flowers. Capsule small, brown.

We know not that this plant has any thing but beauty to recommend it. We conclude with it the history of the British *Hyperica*, all of which, as far as hitherto known, have now appeared in the present work.



Oct. 1. 1803. Published by Jas. Sowerby, London.

ARCTIUM Lappa.

Burdock, or Clot-Bur.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Cal.* globose; each of its scales terminating with an incurved hook.

SPEC. CHAR. Leaves heart-shaped, without prickles, on footstalks.

SYN. Arctium Lappa. *Linn. Sp. Pl.* 1143. *Sm. Fl. Brit.* 844. *Huds.* 348. *With.* 694. *Hull.* 178. *Relh.* 314. *Sibth.* 243. *Abbot.* 174. *Curt. Lond. fasc.* 4. *t.* 55. *Woodv. Med. Bot. t.* 15.

Lappa n. 1—6. *Dill. in Raii Syn.* 196, 197.

A PLANT almost every where to be found in waste or neglected ground, varying much according to the luxuriancy of the soil, (see Ray's *Synopsis*), and thriving particularly on dunghills. It flowers in July and August, and is biennial.

Root tapering. Stem erect, much branched and widely spreading, somewhat pyramidal, 3 feet or more in height, furrowed, downy, often purple. Leaves alternate, heart-shaped, acute, waved, ribbed, three-nerved at the base, white and downy beneath. They stand on concave footstalks, and are, when full sized, almost the largest leaves of any British plant. Flowers nearly sessile, clustered about the upper part of the stem and branches. Calyx globular, formed of numerous narrow scales, each tipped with a little incurved hook, by means of which the whole calyx, when laden with ripe seed, easily separating from its stalk, adheres to the hairy or woolly coats of animals, who can scarcely free themselves from this encumbrance without rubbing the calyx to pieces, and so scattering the seed about their habitations, where it is most likely to meet with a manured soil. The florets are purple, all tubular and regular. Receptacle bristly, as is also the crown of the seed.

The flowers vary in size, as well as in having more or less cottony down about their calyx.

Oct. 1. 1803. Published by J.C. Sowerby, London.

TANACETUM vulgare.

Common Tansy.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Seeds* crowned. *Cal.* imbricated, hemispherical. *Florets* of the radius three-cleft, obsolete; sometimes wanting.

SPEC. CHAR. Leaves doubly pinnatifid, deeply serrated, naked.

SYN. Tanacetum vulgare. *Linn. Sp. Pl.* 1184. *Sm. Fl. Brit.* 862. *Huds.* 357. *With.* 708. *Hull.* 182. *Relh.* 321. *Sibth.* 249. *Abbot.* 179. *Woodv. Med. Bot. t.* 115.

Tanacetum. *Raii Syn.* 188.

THIS well-known plant not unfrequently occurs in hilly pastures and by road sides, generally in large patches, flowering in July and August. It abounds on Newmarket heath, where our specimen was gathered.

Root perennial, creeping. Stems erect, a foot or two in height, scarcely branched, leafy, angular. Leaves numerous, alternate, clasping the stem, spreading but little, deeply divided into numerous, uniform, oblong, deeply serrated lobes, all naked or destitute of pubescence, except occasionally underneath, though harsh and rough to the touch. Flowers in a terminal flat corymbus, of a full uniform yellow, hemispherical. Perfect florets of the disk tubular, 5-cleft, very numerous; those of the radius few, ligulate, tipped with 3 teeth, but often wanting, and when present so short and inconspicuous as not to be observable without attention. Seeds obovate, each bearing a 5-sided chaffy crown.

The whole plant is very bitter, and exhales a peculiar strong scent. It is recommended in several disorders as a tonic and cordial, as well as to expel worms. It also serves to give its flavour to a kind of rich pudding, now grown obsolete in England, and seldom seen but at corporation feasts.

A curled variety, noticed by Dillenius, is now and then seen in gardens, and is esteemed more grateful to the stomach than the wild plant.

Oct.r 1.1803. Published by Jas. Sowerby, London.

ARTEMISIA Absinthium.

Common Wormwood.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked or downy. *Seed-down* none. *Cal.* imbricated, the scales roundish and closed. *Florets* of the radius awl-shaped, undivided.

SPEC. CHAR. Leaves in many deep divisions, clothed with close silky down. Flowers hemispherical, pendulous. Receptacle hairy.

SYN. Artemisia Absinthium. *Linn. Sp. Pl.* 1188. *Sm. Fl. Brit.* 865. *Huds.* 358. *With.* 710. *Hull.* 182. *Relh.* 322. *Sibth.* 250. *Abbot.* 179. *Woodv. Med. Bot. t.* 120.

Absinthium vulgare. *Raii Syn.* 188.

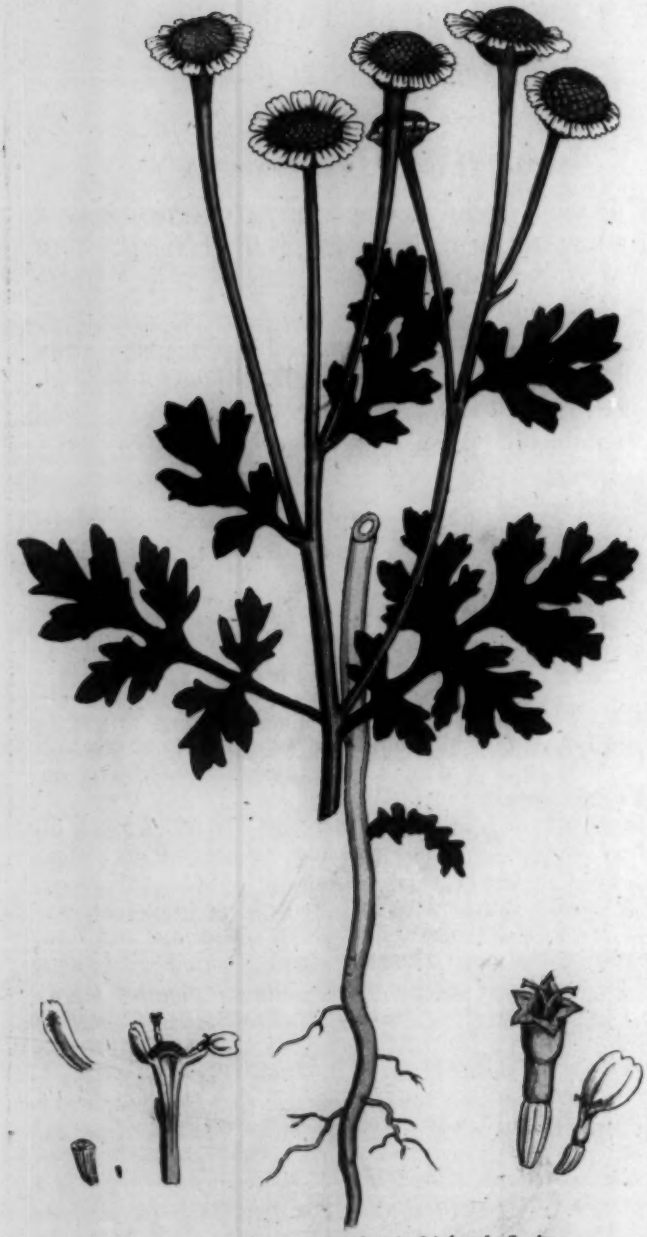
WORMWOOD grows in the midst of almost every english village, particularly where the soil is chalky or gravelly. There, on many a rugged dusty green, where the whipping-post and stocks, with their appropriate distich

> " Fear God and honour the King,
> Or else they will you into me bring,"

are, as Shakespear says, *wormwood* to the idle and disorderly, this herb is sure to be met with. It is perennial, and flowers in August.

The stems form tufts about a foot high, and are furrowed, branched and leafy. The whole plant is of a pale whitish green, and clothed with short or close-pressed silky down. Leaves alternate, doubly but irregularly pinnatifid, their edges entire. Clusters of flowers collected into a leafy panicle. Each flower is broad and hemispherical, drooping: the disk buff-coloured. The styles are large, recurved, with cloven stigmas. The florets of the radius short, and rather ovate. Receptacle very hairy.

This plant is remarkable for its intense bitterness united to a peculiar strong aromatic odour. It is often used to keep insects from clothes and furniture. As a medicine it is one of the most active bitters, and from its effect upon the nerves not to be used without caution. The vegetable alkali of the shops was for a long time procured from this plant exclusively.



Nov.r 1. 1803. Published by Jas. Sowerby, London.

PYRETHRUM Parthenium.

Common Feverfew.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked. *Seeds* crowned with a membranous margin. *Cal.* hemispherical, imbricated with sharpish scales, bordered with a membrane.

SPEC. CHAR. Leaves compound, flat, on foot-stalks; leaflets ovate, cut. Flower-stalks branched, corymbose. Stem erect.

SYN. Pyrethrum Parthenium. *Sm. Fl. Brit.* 900. *Relh.* 334.

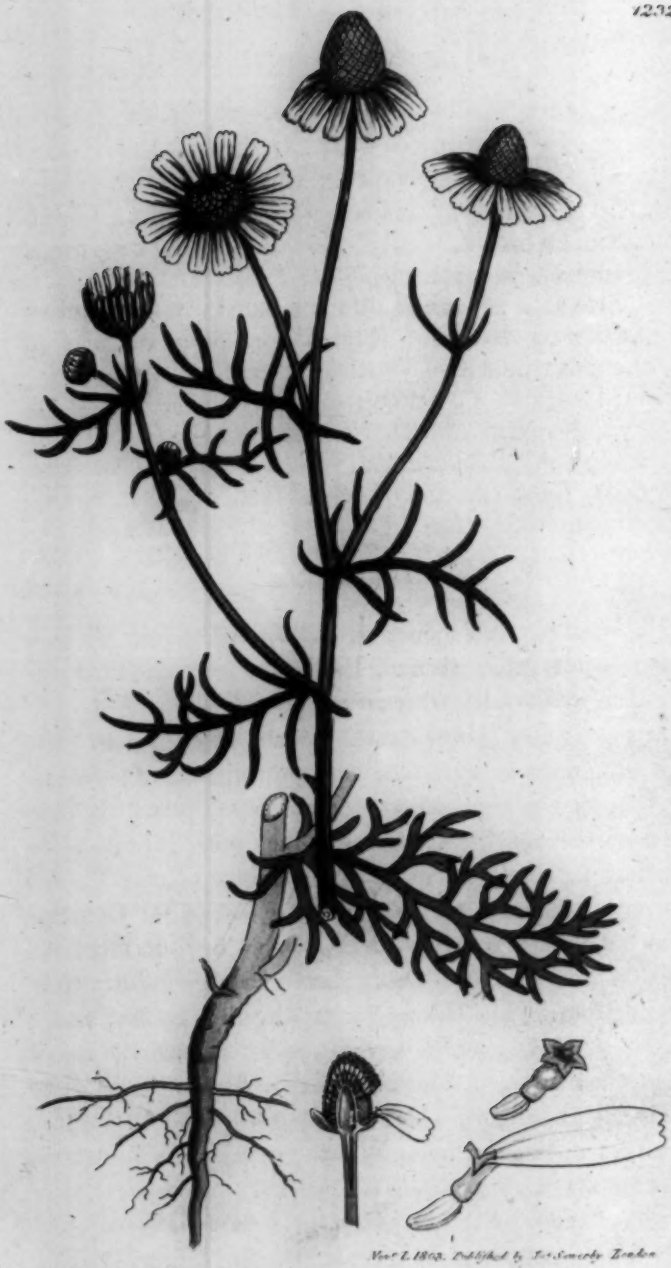
Matricaria Parthenium. *Linn. Sp. Pl.* 1255. *Huds.* 371. *With.* 735. *Hull.* 184. *Sibth.* 258. *Abbot.* 185. *Woodv. Suppl. t.* 249.

Matricaria. *Raii Syn.* 187.

FREQUENT in waste ground and about hedges, flowering in June and July. Deserted gardens in towns are soon overrun with it. The root is perennial, but seems to bear flowers the first year of its growth.

The stem is erect, branched, furrowed, leafy. Leaves on foot-stalks, simply or doubly pinnated, lobed and cut; their segments more or less ovate, decurrent, of a dull palish green, somewhat hoary. Flowers on long, simple or branched, angular stalks, which are thicker towards their summit, and form a sort of terminal corymbus. Calyx hemispherical or flattish, downy. Disk yellow. Radius short, white, sometimes wanting; its florets approaching to the roundish figure of those of the *Achilleæ*. Seeds furrowed, crowned with a small membrane, which some authors have overlooked. Receptacle naked, flattish. The flowers are often double; that is, the yellow florets of the disk all become ligulate and white like those of the radius.

Feverfew ranks with the plants in our two preceding plates as an aromatic bitter and tonic, and is reported to be particularly useful in hysteric disorders. Its english name seems to imply a febrifuge quality.



Nov 1, 1803. Published by J. & Sowerby London

MATRICARIA Chamomilla.

Wild Chamomile.

SYNGENESIA Polygamia-superflua.

GEN. CHAR. *Recept.* naked, almost cylindrical. *Seeds* without a crown. *Cal.* flattish, imbricated with membranous-bordered scales.

SPEC. CHAR. Leaves smooth, pinnated; leaflets linear, simple or divided. Radius spreading. Scales of the calyx dilated.

SYN. Matricaria Chamomilla. *Linn. Sp. Pl.* 1256. *Sm. Fl. Brit.* 902. *Huds.* 372. *With.* 736. *Hull.* 184. *Relh.* 335. *Sibth.* 258. *Abbot.* 185. *Curt. Lond. fasc.* 5. *t.* 63. *Mart. Fl. Rust. t.* 74. Chamæmelum. *Raii Syn.* 184.

THIS weed is much more plentiful about London, where it grows in fields, waste ground, about road sides and on dunghills, than in Norfolk, where it rarely occurs.

The root is fibrous and annual. Stem about a foot high, much branched and very leafy, smooth, striated. Leaves sessile, clasping the stem, smooth, deep green, pinnated; their leaflets narrow and linear; simple in the upper, pinnate in the lower leaves; all obtuse tipped with a minute point. Flowers numerous, terminal, solitary, about the size of the Common or Sweet Chamomile, and partaking somewhat of its fragrance. Calyx flattish, smooth. Disk conical, pale greenish yellow. Radius of many white oblong florets, spreading by day, closely deflexed at night. Seeds angular, oblique, entirely naked. Receptacle between a conical and cylindrical form, slender, smooth and naked; by which last circumstance this is known at once from *Anthemis arvensis*, *v.* 9. *t.* 602, without adverting to the more hoary appearance of the latter. *Anthemis Cotula*, more like the *Matricaria* in general appearance, is distinguished by its fœtid smell, and narrow bristly scales of its receptacle.

Nov.1 1808. Published by Jas. Sowerby, London.

LEMNA gibba.

Gibbous Duck-weed.

MONOECIA Diandria.

GEN. CHAR. Male, *Cal.* of one leaf. *Cor.* none. Female, *Cal.* of one leaf, *Cor.* none. *Style* 1. *Caps.* with several seeds.

SPEC. CHAR. Leaves sessile, a little convex above, hemispherical beneath. Roots solitary.

SYN. Lemna gibba. *Linn. Sp. Pl.* 1377. *Sm. Fl. Brit.* 957. *With.* 44. *Hull.* 202. *Relh.* 346. *Sibth.* 15. *Abbot.* 199.

L. minor β. *Huds.* 399.

Lenticula palustris major, infernè magìs convexa, fructu polyspermo. *Mich. Gen.* 15. *t.* 11. *f.* 1.

MR. BORRER, to whom we are obliged for *Lemna minor*, *t.* 1093, gathered the flowering specimens here delineated of *L. gibba*, the end of last June, at Lewes in Sussex, the only place in which he has observed the fructification *. We do not know that it has been seen any where in Britain before. The plant itself is indeed among the rarer species of *Lemna*.

This differs from the *minor* in being larger, remarkably tumid and succulent, of an extremely vascular texture. Its upper surface is convex, often of a purplish hue; the lower paler, and almost hemispherical. Roots generally solitary, sometimes in pairs. Flowers solitary, from the margin of the leaf. Micheli observed a concave calyx, which he says soon disappears, leaving the stamina and pistillum naked, in which state are our specimens. Probably what we have figured in *L. minor* is only the calyx in its early or more evident state, and not a corolla.

With respect to the place of these plants in the Linnæan system, they seem most properly to belong to *Diandria Monogynia*.

* Ehrhart observed it at Hanover, July 13, 1779.

Nov.r 1.1803. Published by Jas Sowerby, London.

CAREX distans.

Loose Carex.

MONOECIA Triandria

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths elongated, nearly as long as the flower-stalks. Spikes oblong, very remote. Scales pointed. Stem smooth.

SYN. Carex distans. *Linn. Sp. Pl.* 1387. *Sm. Fl. Brit.* 993. *Gooden. Tr. of Linn. Soc. v.* 2. 178. *Huds.* 412. *With.* 100. *Hull.* 207. *Relh.* 368. *Sibth.* 31. *Abbot.* 202. *Schkuhr. n.* 87. *t.* T. *f.* 68. Gramen cyperoides spicis parvis longissimè distantibus. *Raii Syn.* 420.

THIS Carex most frequently occurs in such marshy places as are not remote from the sea, but it is sometimes found in mountainous countries. Our specimen grew at Yarmouth. It is perennial, and flowers in June.

Root fibrous. Stem 12 to 18 inches high, weak but nearly upright, bluntly triangular, or rather flattened on one side only, smooth, except sometimes near the top. Leaves short and rather broad, flat, with rough edges; the floral ones longer and narrower. Their sheaths of a moderate length, almost entirely concealing the corresponding flower-stalks, which stand very remote from each other, 2 or 3 on each stem. Male spike solitary, lanceolate, with obovate scales: females erect, ovate, short; their scales broad, of a rusty hue, their keel 3-ribbed, tipped with a short point. Fruit ovate, longer than the scales, brown, smooth, with many uniform ribs, and a short cloven beak. Stigmas 3. Seed appearing granulated under a high magnifier.

Nov.1 1809. Published by Jas. Sowerby, London.

CAREX binervis.

Green-ribbed Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

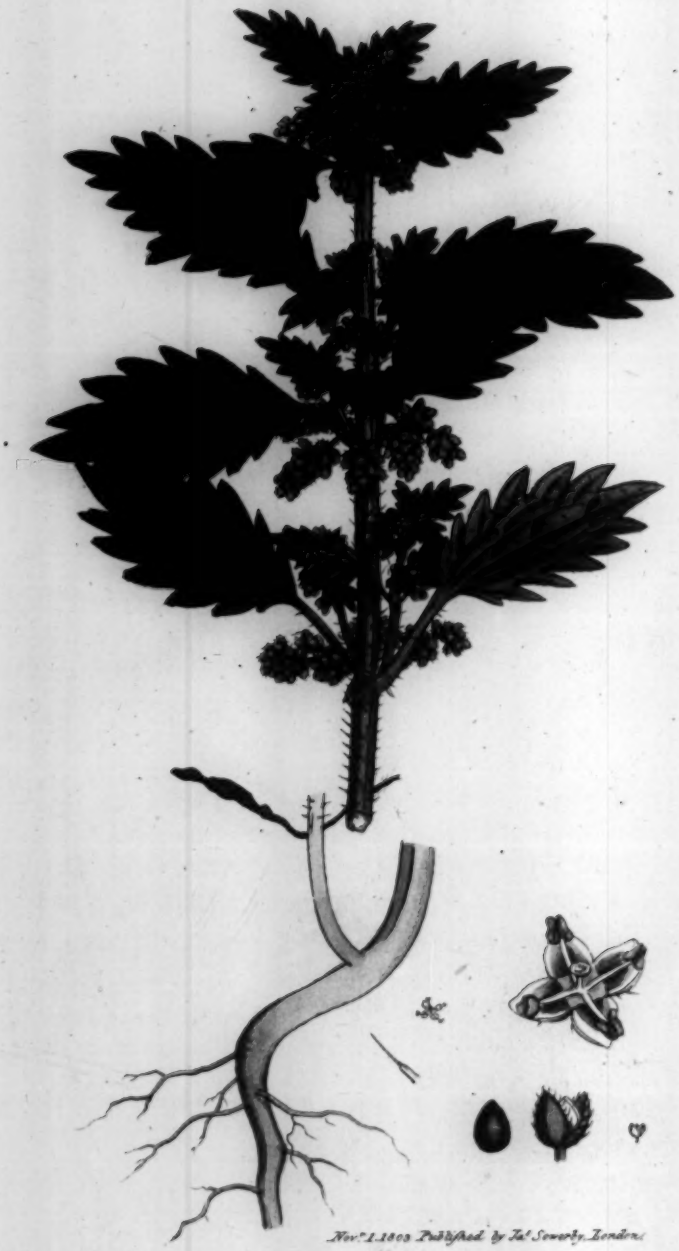
SPEC. CHAR. Sheaths elongated, shorter than the flower-stalks. Spikes cylindrical, remote, often compound. Scales pointed. Fruit with two principal ribs.

SYN. Carex binervis. *Sm. Tr. of Linn. Soc. v. 5. 268. Fl. Brit. 993.*

C. distans. *Lightf. 561.*

WE have received this from Mr. Brunton, who gathered it near Rippon, and from various parts of Britain. Prof. Beattie informs us that it is very common on the driest moors or heaths about Aberdeen, flowering in June. From Lightfoot's description it appears to be his *C. distans*, and indeed the best botanists have hitherto confounded it with that species.

It differs from *C. distans* in being larger in all its dimensions, with a firmer stem, and a deeper green colour, with a glaucous tinge. The spikes moreover are of a blackish hue. The lowermost female spikes are generally branched or compound at the base, and their stalk projects considerably beyond the sheath of the bractea. Their scales are almost black, with a 3-ribbed green rough keel and point. But the essential character resides in the fruit, which has 2 principal ribs or nerves (besides several small ones) greener than any other part, running longitudinally at some distance from the margin, on the outer side only. The inner side of the fruit is most stained with purple, and has many uniform ribs. The stigmas are 3.



Nov.r 1.1803 Published by Ja.s Sowerby, London.

URTICA urens.

Small Nettle.

MONOECIA Tetrandria.

GEN. CHAR. Male, *Cal.* 4-leaved. *Cor.* none. Rudiment of a *germen* cup-shaped. Female, *Cal.* 2-leaved. *Cor.* none. *Seed* 1, superior, polished.

SPEC. CHAR. Leaves opposite, elliptical, about five-ribbed. Clusters nearly simple.

SYN. Urtica urens. *Linn. Sp. Pl.* 1396. *Sm. Fl. Brit.* 1015. *Huds.* 417. *With.* 202. *Hull.* 210. *Relh.* 374. *Sibth.* 62. *Abbot.* 208. *Curt. Lond. fasc.* 6. *t.* 70.

U. minor. *Raii Syn.* 140.

THIS troublesome and prolific weed is sufficiently well known to cultivators of every description. It is an annual of quick growth, thriving most on a light soil, and often forming two crops in the course of the year.

Its humbler size, annual fibrous root, brighter green colour, and elliptical leaves, clearly distinguish it from the equally common *Urtica dioica*. The Roman nettle, figured in our 3d vol. *t.* 148, is known from both by its globular heads of seeds.

Mr. Curtis has most accurately investigated the stinging property for which these 3 species are remarkable. They are covered, as every body knows, with small projecting prickles, which when slightly touched inflict a highly venomous wound. Each prickle is tubular, standing on a bag of poison, and perforated at the point, so that when gently pressed vertically, the pressure at once forces the poison to ascend the tube, and enables the point to lodge it in the skin of the hand that touches it. It may be useful to know that the juice of Dock (*Rumex*), *Plantago lanceolata*, *v.* 8. *t.* 507, or even of the Nettle itself, are speedy remedies for the sting.

Nov.r 1 1803. Published by J.t Sowerby, London.

BARTRAMIA arcuata.

Curve-stalked Bartramia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* spherical, at length furrowed. *Outer fringe* of 16 tapering teeth; *inner* a plaited membrane.

SPEC. CHAR. Fruit-stalks recurved. Leaves lanceolate, many-nerved, finely serrated. Branches scattered, spreading.

SYN. Mnium arcuatum. *Dicks. Crypt. fasc.* 3. 2. *t.* 7. *f.* 3. *H. Sicc. fasc.* 6. 19. *With.* 803.

M. chrysocomum. *Hedw. Sp. Musc.* 74.

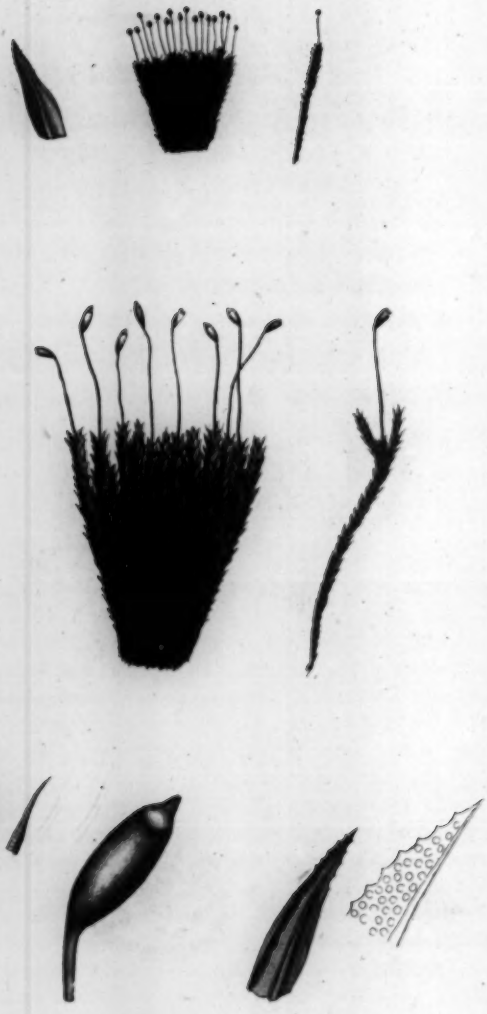
Hypnum chrysocomum. *Dicks. Crypt. fasc.* 2. 12.

H. palustre erectum, comâ luteâ, basi nigricante. *Dill. Musc.* 302. *t.* 39. *f.* 36. *Raii Syn.* 83.

Bryum arcuatum. *Hull.* 255.

THIS elegant moss is a native of alpine bogs. It was known, without fructification, to Richardson and Dillenius; but the capsules were first discovered in Yorkshire and Cheshire by Mr. Bradbury, who sent them a few years since to Mr. Dickson. Our specimen was gathered at Beddgelart, North Wales, by Mr. D. Turner in July 1802.

The stems are perennial, erect, leafy, clothed with dense rusty pubescence, and divided irregularly into various spreading branches. Leaves imbricated, spreading, of a yellowish shining green, lanceolate, pointed, evidently, though finely, serrated, furnished with many lateral ribs or nerves besides the principal one. Stalks solitary, at first terminal, but by the branching of the stem above them they soon become lateral; they are short, red, recurved, with a few small scales at their base. Capsule drooping, globose, green and smooth when young, but brown and marked with 16 furrows when ripe. Lid red, convex with a blunt point. Outer fringe shortish, red; inner white and very thin, with 16 teeth.



Nov.r 1.1803. Published by Jas. Sowerby, London.

MNIUM androgynum.

Narrow-leaved Spring-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical, at length furrowed. *Outer fringe* of 16 tapering teeth; *inner* a laciniated membrane. *Veil* smooth. *Flowers* terminal.

SPEC. CHAR. Monoecious. Capsule straight. Lid conical. Leaves imbricated every way, spreading, toothed at the point.

SYN. Mnium androgynum. *Linn. Sp. Pl.* 1574. *Huds.* 472. *Hedw. Theor.* 149. *t.* 12. *f.* 48---50.

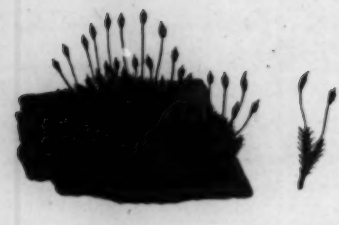
M. perangustis et brevibus foliis. *Dill. Musc.* 230. *t.* 31. *f.* 1. *Raii Syn.* 78.

Bryum androgynum. *Hedw. Sp. Musc.* 178. *With.* 836. *Hull.* 262. *Abbot.* 238.

IT was with singular pleasure I found, on a careful scrutiny of the genera of mosses for the *Flora Britannica*, that the original genus of *Mnium* in Dillenius ought on every account to be preserved separate from *Bryum*, and that the furrowed capsule formed its decisive and unexceptionable character. No real *Bryum* has any signs of this character; nor any *Hypnum*, except the *undulatum*, a moss so peculiar in other respects as to merit further inquiry.

M. androgynum grows in moist shady boggy places, flowering in March, when its little powdery heads of male blossoms, standing on tender terminal stalks, may not unfrequently be observed; but the capsules, which ripen in April or May, are very rarely produced. Our figure was drawn from Mr. Turner's herbarium.

The stems form dense perennial tufts, and are branched and leafy. Leaves bright-green, pellucid, dotted, imbricated in every direction, lanceolate, single-ribbed, acute, somewhat revolute, finely toothed towards the point. Fruit-stalks solitary, on the same plant with the male flowers, shining, red below, yellow above. Capsule nearly upright, cylindrical, deeply furrowed. Lid short, conical, blunt, striated, a little curved. Outer fringe with taper-pointed teeth; inner finely ciliated.



Nov.r 1.1803. Published by Jn.o Sowerby, London.

MNIUM conoideum.

Club-fruited Spring-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical, at length furrowed. *Outer fringe* of 16 tapering teeth; inner a laciniated membrane. *Veil* smooth. *Flowers* terminal.

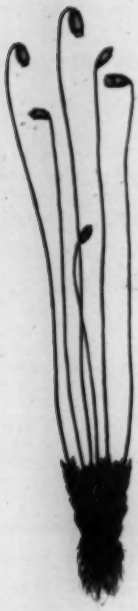
SPEC. CHAR. Monoecious? Capsule straight, obovate. Lid awl-shaped. Leaves imbricated every way, spreading, entire.

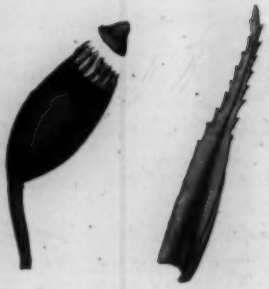
SYN. Bryum conoideum. *Dicks. Crypt. fasc.* 4. 9. *t.* 11. *f.* 2.

THIS moss unquestionably belongs to the same genus with the preceding, with which it agrees closely in habit, especially in the peculiar round dots of its leaves, as well as in the essential generic character of the furrowed capsule. Mr. Dickson found it on the trunks of Beeches near Inverary. Our specimens were gathered by Mr. Templeton, on Pear-trees in his orchard near Belfast; and it is to this gentleman, through Mr. Turner, we are entirely indebted for a knowledge of the inner fringe, which he describes and delineates in fine capillary segments, just as analogy would lead us to expect it. Of the male flowers we have no knowledge, and therefore cannot positively pronounce the plant monoecious or dioecious.

Every part is much smaller than in *M. androgynum*. The stems form perennial tufts, and are mostly simple, erect, leafy. Leaves of a dull pellucid green, imbricated, spreading every way, oblong, entire, with one rib and an obscure point. Stalk terminal, short, yellowish. Capsule nearly erect, obovate, obtuse, pale brown. Lid awl-shaped, acute, often curved, about as long as the capsule. Outer fringe of 16 shortish teeth; inner as above described.

The third British species of *Mnium* is figured in our *v.* 6. *t.* 391, by the name of *Bryum palustre*.





Nov.r 1 1808. Published by Jas Sowerby, London.

BRYUM nutans.

Silky Pendulous Thread-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovato-oblong, smooth. *Fringe* double: *outer* of 16 teeth, broad at their base: *inner* a toothed membrane. *Flowers* terminal.

SPEC. CHAR. Stem mostly simple. Leaves lanceolate, acute, keeled. Capsule obovate, pendulous, obtuse.

SYN. Bryum nutans. *Schreb. Lips.* 81. *Swartz. Musc. Suec.* 46. *Roth. Germ. v.* 3. 252.

B. sericeum. *With.* 839. *Hull.* 265. *Sibth.* 292.

B. trichodes læte virens, capitulis cernuis oblongis. *Dill. Musc.* 391. *t.* 50. *f.* 61. *Raii Syn.* 100.

Webera nutans. *Hedw. Sp. Musc.* 168. *Crypt. v.* 1. 9. *t.* 4.

FOUND on mountainous heaths, ripening its fruit in July and August. Dillenius gathered it near Woolwich; the Rev. Dr. Abbot in Apsley wood, Bedfordshire; and Mr. Turner near Dublin. We have seen it about rocks on Cromford moor, near Matlock.

The stems grow erect in dense tufts, and are for the most part simple and short, most leafy at their summits. The leaves are of a light shining yellowish green, lanceolate, acute, tipped with a serrated point, and furnished with one rib. Fruit-stalk terminal, solitary, very long, frequently even 3 inches, of a polished red or tawny purple, paler upwards. Capsule pendulous, obovate, obtuse, or as it were truncate, of a rusty hue, opaque, tapering very little at the base. Lid convex, with a short blunt point. Outer fringe yellowish; inner variously laciniated.

The great Hedwig found the stamina in the same flower with the pistillum, and on that account separated his genus of *Webera* from *Bryum*. We think with Dr. Swartz that such a circumstance does not in mosses form a natural genus.

According to the Rev. H. Davies the *B. sericeum* of Hudson is only *B. crudum*. The herbarium of Dillenius shows that he confounded this plant with *Pohlia elongata* of Hedwig.

Nov.r 1. 1803. Publ.shed by Jas Sowerby. London.

FUCUS dentatus.

Toothed Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

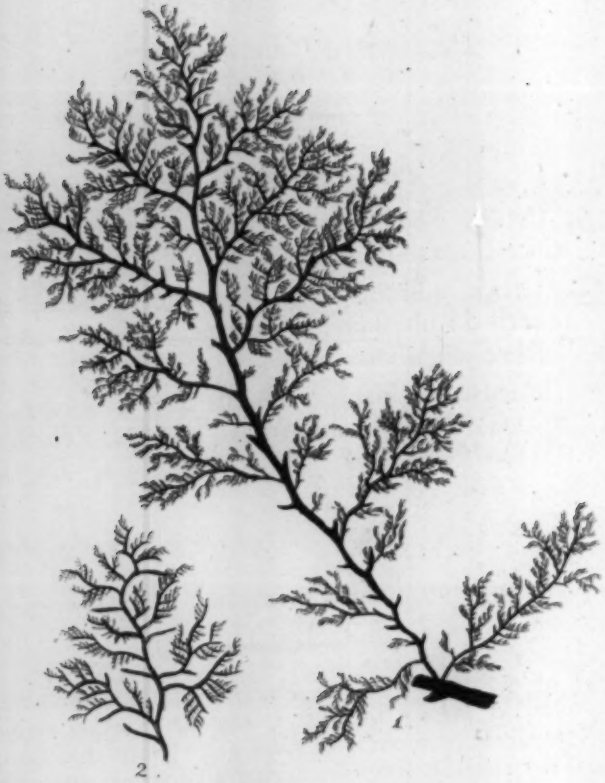
SPEC. CHAR. Frond membranous, branched, alternately pinnatifid, obscurely ribbed: ultimate branches linear, sharply toothed at their extremities. Fruit clustered.

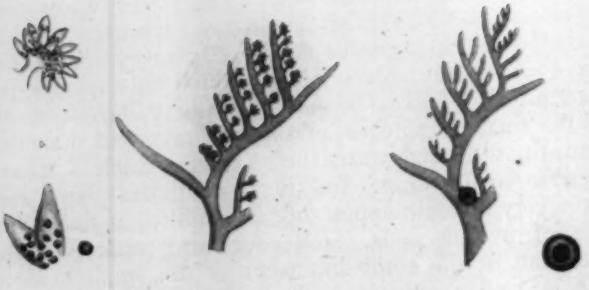
SYN. Fucus dentatus. *Linn. Mant.* 135. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 158. *Turn. Syn.* 149. *Huds.* 582. *With. v.* 4. 102. *Hull.* 320. *Lightf.* 952. *Stackh. t.* 15.

F. membranaceus rubens, foliolis latiusculis ad extremitates dentatis. *Moris. sect.* 15. *t.* 8. *f.* 5.

FROM one of the specimens gathered by Mr. R. Brown on the coast of Ireland, and alluded to in Mr. Turner's Synopsis, our figure No. 1 has been engraved. No. 2 was found in Scotland by Mr. J. Reid. We have met with this species at the Frith of Forth, but it is justly reckoned among the rarer kinds.

The frond rises from a callous disk to the height of 4 or 5 inches, sometimes more, and is doubly pinnatifid in an alternate order, flat and membranous, though not very tender. A strong mid-rib is visible in its lower part, though much compressed, and becoming imperceptible in the ultimate branches, which are linear, or inclining to a wedge-shape, sharply toothed at their extremities. The proper fructification is here seen on Mr. Brown's specimen, consisting of axillary clusters of pointed pods, each containing 2 rows of numerous seed-bearing tubercles. On Mr. Reid's are clusters of a different kind of tubercles, hitherto nondescript, nor has any conjecture been formed concerning them. We should guess them to be pods rendered abortive, either for want of impregnation, or by the injury of some marine animal. The colour of the whole Fucus is a dark reddish brown, becoming a pale pink in the more delicate parts.





Nov.r 1. 1809. Published by Jas. Sowerby, London.

FUCUS coccíneus.

Pectinated Crimson Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond somewhat cartilaginous, much branched: ultimate branches pectinated on one side. Tubercles globose, sessile.

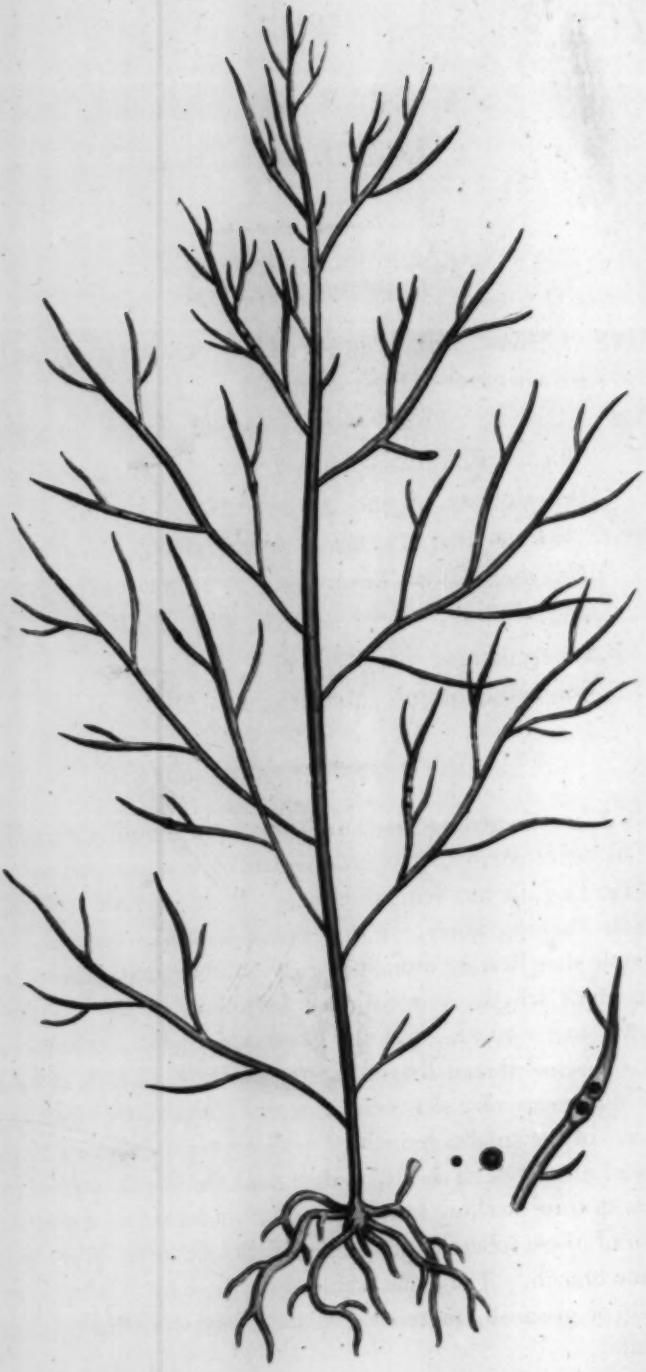
SYN. Fucus coccineus. *Huds.* 586. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 187. *Turn. Syn.* 291. *With. v.* 4. 119. *Hull.* 324. *Dicks. H. Sicc. fasc.* 16. 25.

F. plocamium. *Gmel. Fuci*, 153. *t.* 16. *f.* 1. *Lightf.* 957.

Muscus marinus rubens pennatus. *Raii Syn. ed.* 2. 8.

ONE of the most common *Fuci* on all our coasts, universally admired for its brilliant colour and elegant structure, which render it preferable to most other sea plants for ornamental purposes. It fructifies during the summer and autumn.

The root is perennial, fibrous, throwing out many compressed much branched fronds, of a delicate pale crimson colour, and rather cartilaginous than membranous texture. The ultimate branches are zigzag and alternate, their segments finely pectinated on the fore side only; by which this species is clearly determined. Tubercles solitary, axillary, sessile at the base of the smaller branches, of a much darker red than the frond, from the seeds lodged in their centre. Such is what should seem to be the proper fructification of this plant, see *fig.* 1; but a very different appearance is exhibited at *f.* 2, where clusters of oblong pods, each containing numerous tubercles, grow out of the comb-like teeth of the small branches, and bear an evident analogy to the fructification of *F. dentatus* and *subfuscus*. Hence Mr. Turner is induced to suspect our *f.* 2 to be a distinct species, though otherwise not at all different from *f.* 1, except in being sometimes narrower in the frond. We wish for the present to collect facts on the subject of the fructification of *Fuci*, rather than to form decisions.



Dec.r 1 1803 Published by Jas Sowerby London

FUCUS purpurascens.

Purplish Knotted Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

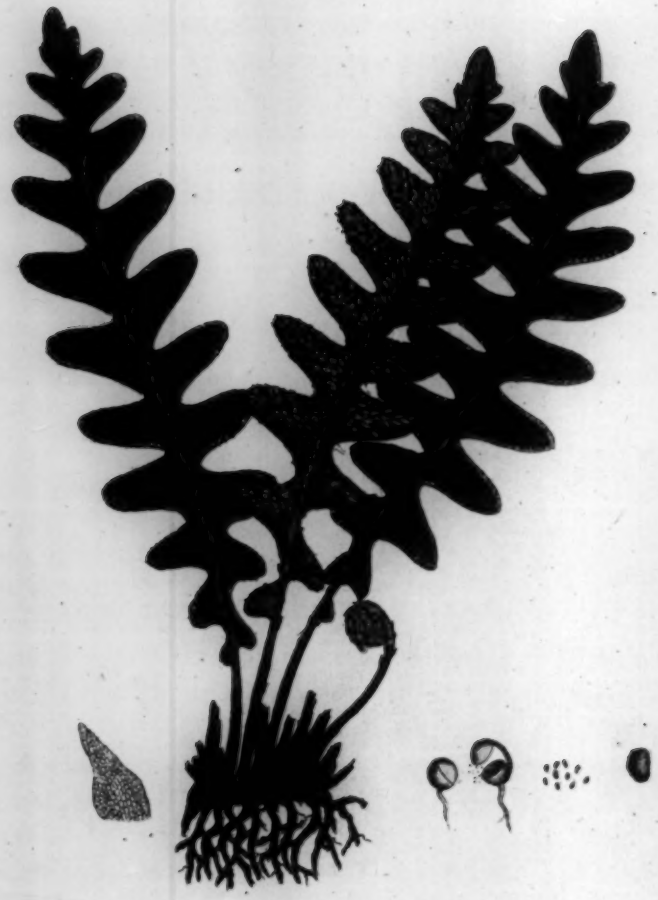
SPEC. CHAR. Frond thread-shaped, much branched: ultimate divisions bristle-shaped, scattered. Tubercles globose, turgid, imbedded.

SYN. Fucus purpurascens. *Huds.* 589. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 225. *Turn. Syn.* 357. *With. v.* 4. 113. *Hull.* 327. *Velley, t.* 2. *f.* 2.

F. tuberculatus. *Lightf.* 926.

F. teres albus tenuissime divisus. *Raii Syn* 50.

WE are obliged to Mr. Turner for a Yarmouth specimen of *F. purpurascens*, which indeed frequently occurs on various parts of the English and Scottish coasts. Root perennial, of many thick clasping fibres. Frond thread-shaped, consisting of a simple stem bearing numerous compound branches throughout its whole length, as mentioned by Doody in Ray's Synopsis p. 51, under n. 52. All the general and partial branches are of the same thread-shaped figure, tapering at each end; the ultimate ones very slender and acute. About the middle of many of the smaller branches, in their very substance, is produced a tubercle of seeds, darker than the frond, and in process of time swelling much beyond it in diameter. Sometimes two of these tubercles grow one a little above the other in the same branch. The general colour of the whole Fucus is reddish or greenish, more or less pale, and sometimes almost white.



Dec.r 1. 1803. Published by Jas. Sowerby, London.

SCOLOPENDRIUM Ceterach.

Common Scaly Spleenwort.

CRYPTOGAMIA Filices, annulatæ.

GEN. CHAR. *Fructif.* in scattered double lines, between veins. *Invol.* superficial, folding lengthwise over one another, separating by a longitudinal suture.

SPEC. CHAR. Frond pinnatifid, lanceolate, scaly beneath.

SYN. Scolopendrium Ceterach. *Sm. Fl. Brit.* 1134. *Sym.* 193. *Roth. Germ. v.* 3. 48.

Asplenium Ceterach. *Linn. Sp. Pl.* 1538. *Huds.* 452. *With.* 767. *Hull.* 241. *Bolt. Fil.* 20. *t.* 12.

A. sive Ceterach. *Raii Syn.* 118.

LESS frequent than the other British *Scolopendrium* represented in our *t.* 1150, but still far from uncommon on calcareous rocks and walls in the west and north of England. About Bristol it has been constantly observed since the days of Ray. In Oxfordshire and even in Norfolk, it is sometimes seen on old churches or castles. It is found in fructification at all seasons, when situated in shady or moist places. We have preserved it for several years in a garden.

The root is perennial, furnished with many very black fibres. Fronds numerous, from 4 to 8 inches high, spreading, lanceolate, deeply cut into numerous alternate, entire, blunt, regular lobes; smooth and dark green above, not shining; densely covered beneath with membranous, lanceolate, reticulated, serrated, shining, rusty-coloured scales, which give this fern a very peculiar and striking appearance. The lines of capsules are numerous, bordered on each side by an entire involucrum, which however is so much concealed by the scales, as not to be discoverable without great care. The stalk of the frond is black and shining, more or less scaly.

Dec.r 1. 1803. Published by Ja.s Sowerby, London.

GYMNOSTOMUM fasciculare.

Blunt Pear-shaped Beardless-moss.

CRYPTOGAMIA Musci.

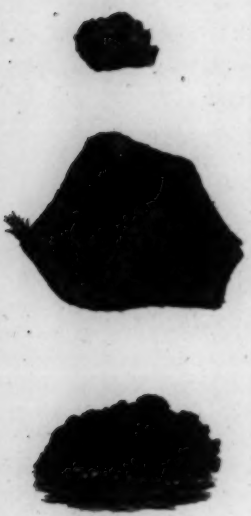
GEN. CHAR. *Caps.* without a fringe. *Lid* deciduous. *Veil* separating entire from the base.

SPEC. CHAR. Stem simple, very short. Leaves ovate, acute, minutely serrated. Capsule pear-shaped. Lid convex, blunt.

SYN. Gymnostomum fasciculare. *Sm. Fl. Brit.* 1165.
Bryum fasciculare. *Dicks. Crypt. fasc.* 3. 3. *t.* 7. *f.* 5. *With.* 815. *Hull.* 257.
B. Ægypti. *Hasselquist's Voyage*, 263.

FEW mosses have been more celebrated, very few less understood, than this. The herbarium of Linnæus shows it to be what Hasselquist gathered on the walls of Jerusalem, and supposed might be the Hyssop of Solomon "which springeth out of the wall;" an ingenious idea which Linnæus adopted, and others have retailed in various places. Our great master, however, has led us all astray by very inaccurately referring Hasselquist's excellent specimens to his own *Bryum truncatulum*. Mr. Dickson, who could not be aware of this, finding the same moss in Britain, described it as new by the name of *B. fasciculare*. To sum up all, the German botanists have mistaken for this plant of Dickson a most slight variety, or rather no variety at all, of *B. pyriforme*, figured by Hedwig as *Gymnostomum fasciculare*, *Sp. Musc. t.* 4; for which last observation, confirmed by authentic specimens, we are indebted to Mr. D. Turner.

Our true *G. fasciculare* is annual, ripening its fruit in the spring. We have it from various parts of Great Britain and Ireland, but it does not often occur. It differs from *G. pyriforme*, *t.* 413, in being more slender, with narrower leaves, slightly serrated, (those of *pyriforme* we now find minutely toothed), twisted when dry, scarcely concave, strongly reticulated. Fruit-stalk slender, of a shining red. Capsule reddish, truly pear-shaped, or contracted above the base. Lid slightly convex, but entirely destitute of a point. Veil long and awl-shaped.



Dec.r 1. 1809. Published by Jas. Sowerby, London.

LICHEN brunneus.

Brown Earth Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust of minute, imbricated, grain-like, lobed, olive-brown scales. Shields crowded, flattish, red-brown; their margin elevated, narrow, crenate, of the colour of the crust.

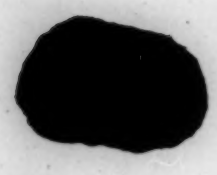
SYN. Lichen brunneus. *Achar. Prod.* 99.
L. pezizoides. *Dicks. Crypt. fasc.* 1. 10. *t.* 2. *f.* 4. *With. v.* 4. 21. *Hull.* 290. *Relh.* 452.
L. multiflorus. *Ehrh. Crypt.* 156.
Parmelia brunnea. *Achar. Meth.* 186.
Patellaria nebulosa. *Hoffm. Pl. Lich. v.* 2. 55. *t.* 40. *f.* 1.
Psora coronata. *Hoffm. Pl. Lich. v.* 3. 3. *t.* 56. *f.* 1.

FIRST discovered in Britain by the son of Dr. Burgess in Dumfriesshire, and by Dr. Buchannan near Stirling. Our specimens were gathered on marine rocks near Bangor, by Mr. D. Turner. It generally grows on the earth, among turf or decayed mosses, in moist situations; and sometimes clothes foliaceous Lichens, looking like their fructification; an instance of which was shown us by the Rev. Mr. Williams of Shropshire.

The crust consists of minute imbricated lobed leaves or scales, of an olive brown, somewhat glaucous. The shields are excessively crowded in some specimens, so as to become angular; in others they are more distant and round. They vary in size and in colour, being sometimes pale brick-coloured, sometimes dark chesnut. Their disk is nearly flat, surrounded by an elevated but not broad border, of the colour and substance of the crust, crenate, but not leafy.

Mr. Griffith authorizes us to say this is the plant he took for *L. tenuissimus*; see *With. v.* 4. 61 and 21.

We cannot see why the original name *pezizoides* should not have been retained, as we presume this is Weber's plant. Dr. Acharius indeed rather puzzles us in his *Methodus Lichenum* just published, by quoting Weber and Dickson, and yet saying "the synonym in Dickson ought to be excluded." Now he has no synonym but this of Weber, whose specific name he adopts.



Dec.1. 1808. Published by Jas Sowerby, London.

LICHEN escharoides.

Coralline-crusted Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tartareous, brownish ash-coloured, composed of granulated warts. Tubercles convex, irregular, black, with an obsolete black border.

SYN. Lichen escharoides. *Ehrh. Crypt.* 313. *Achar. Prod.* 77.

L. miscellus. *Achar. Prod.* 62.

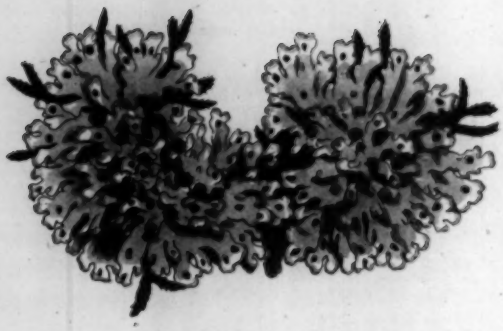
Lecidea miscella. *Achar. Meth.* 39.

THIS new addition to our list of British Lichens was discovered by Mr. D. Turner in his tour to Cornwall in 1799, and near Yarmouth in June last. It grows either on turfy ground or on rocks. Original specimens prove it the real plant of Ehrhart, and consequently of Acharius, who in his first work, not having seen Ehrhart's specimens, mistook his own *L. miscellus* for a different species.

The crust is from a quarter to half an inch in thickness, composed of tartareous granulations, ash-coloured or brownish, various in size and shape, but externally rounded or tumid, with a whitish appearance. Tubercles imbedded among the warts, sessile, quite black, convex, with a scarcely perceptible margin of the same colour.

Some affinity is observable between this species and *L. cæruleo-nigricans, v.* 16. *t.* 1139.

We have a vague recollection of having seen this *L. escharoides* in some English collections, taken for the *atro-albus*, to which it has little affinity except in colour.



Dec.r 1. 1803. Published by Jas Sowerby, London.

LICHEN diatrypus.

Perforated Lichen.

CRYPTOGAMIA Algæ.

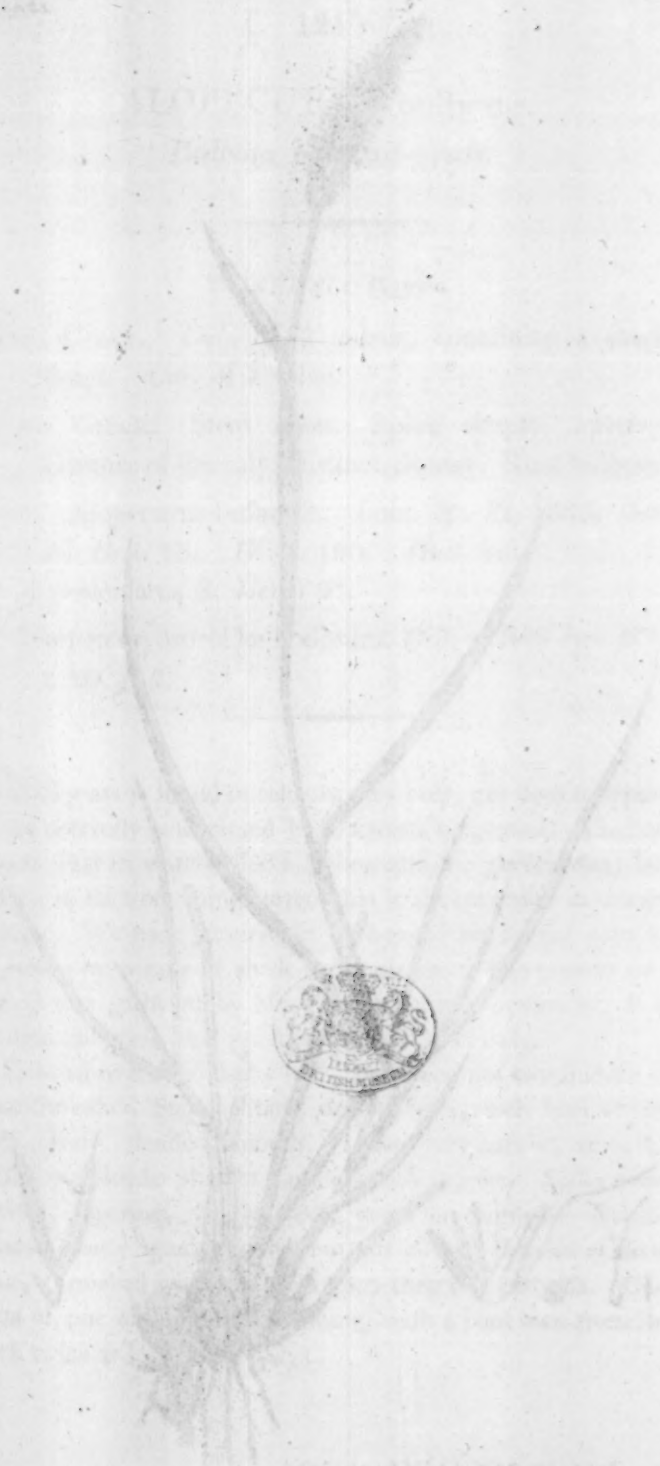
GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

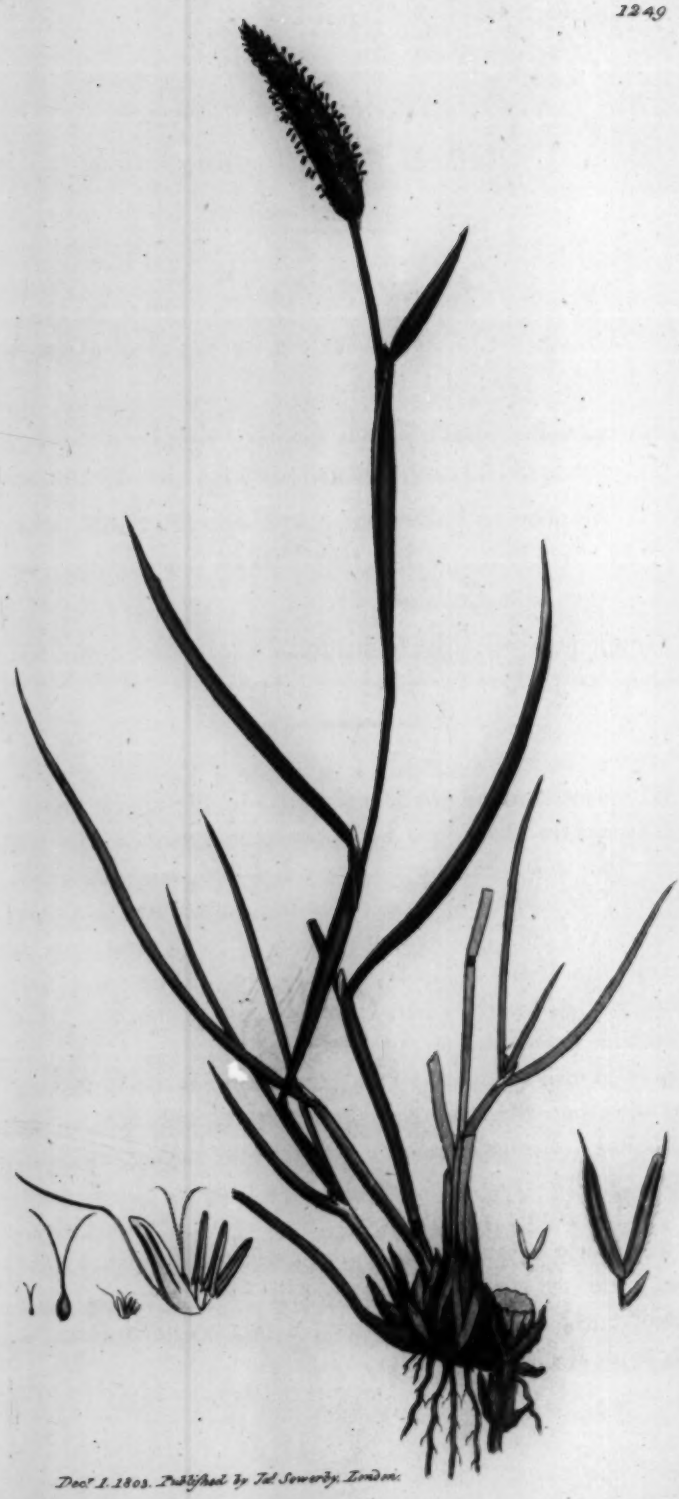
SPEC. CHAR. Imbricated, depressed, composed of a double membrane, black beneath, pale grey above; segments obtuse, inflated and perforated. Shields concave, small, reddish.

SYN. Lichen diatrypus. *Achar. Prod.* 116.
L. pertusus. *Schrad. Spicil.* 96.
Parmelia diatrypa. *Achar. Meth.* 251.
Lobaria terebrata. *Hoffm. Germ. v.* 2. 151.

ON mossy rocks and trees in alpine situations, but never observed in Britain, till Mr. Turner gathered it at Beddgelart at the foot of Snowdon in the summer of 1800.

Wulfen, who has given a figure of this Lichen without fructification in the 3d vol. of Jacquin's Collectanea, confounds it with *L. physodes*, see our *v.* 2. *t.* 126. Dr. Schrader first pointed out their true differences. They both indeed consist of a double membrane, with a considerable vacuity between the two coats, as is the case with 2 or 3 American species lately discovered by the accurate Mr. Menzies; but *L. diatrypus*, besides being more depressed, with a certain air of neatness and regularity in its lobes, is remarkable for having a regular round perforation in the middle of most of its segments, quite through the upper coat. The shields are also, as Schrader well remarks, but half the size of those of *physodes*, nearly sessile, smooth, not wrinkled, in their margin and outside. Powdery warts in abundance grow on the same plant with the shields.





Dec.r 1. 1803. Published by Jas Sowerby, London.

ALOPECURUS bulbosus.

Bulbous Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a single floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem erect. Spike simple, tapering. Glumes of the calyx distinct, downy. Root bulbous.

SYN. Alopecurus bulbosus. *Linn. Sp. Pl.* 1665. *Sm. Fl. Brit.* 73. *With.* 120. *Hull.* 16.

A. geniculatus β. *Huds.* 27.

Gramen myosuroides nodosum. *Dill. in Raii Syn.* 397. *t.* 20. *f.* 2.

THIS grass is found in salt marshes only, nor does it appear to be correctly understood by botanists in general. Hudson asserts that in watery places it becomes the *geniculatus;* but this is so far from being correct that it always grows in watery places. We have preserved it unchanged for several years in a garden by means of shade and moisture. The present specimen was gathered by Mr. Lambert near Weymouth. It is a perennial grass, and produces its flowers in July.

Root an oval solid fleshy bulb, or sometimes two bulbs one over the other. Stem solitary, simple, erect, rarely bent at one joint, leafy, slender, smooth. Leaves very narrow, smooth, with long slender sheaths, and shortish stipulæ. Spike quite simple, tapering, nearly erect, green or purplish. Calyx-glumes nearly equal, pointed but not awned, distinct at their base, furnished with soft hairs upon their keel and ribs. Corolla of one obtuse notched glume, with a bent awn from its back twice as long as the calyx.

Dec.r 1. 1803. Published by Jas. Sowerby, London.

ALOPECURUS geniculatus.

Floating Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a single floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem ascending, bent at the joints. Spike somewhat compound, cylindrical. Glumes obtuse, hairy.

SYN. Alopecurus geniculatus. *Linn. Sp. Pl.* 89. *Sm. Fl. Brit.* 74. *Huds.* 27. *With.* 120. *Hull.* 16. *Relh.* 25. *Sibth.* 35. *Abbot.* 12. *Curt. Lond. fasc.* 5. *t.* 6. *Mart. Rust. t.* 97.

Gramen aquaticum geniculatum spicatum. *Raii Syn.* 396.

VERY frequent in watery situations, by the sides of ditches and ponds, and most commonly floating to a great extent upon their surfaces, flowering in July.

The root is fibrous and perennial. Stems several, various in length, smooth, branched, with many bent joints, the lowermost of which throw out numerous simple radicles when they float on the water. Leaves much broader and shorter than in the last described, smoothish, with long and somewhat inflated sheaths. Stipula oblong, very thin. Spike cylindrical, short in proportion to the stems, bluntish, branched or divisible into lobes, green or purplish. Calyx-glumes nearly equal, blunt, beardless, fringed with long hairs. Corolla very blunt, smooth, crenate, with an awn from the base which varies in length according to circumstances. Nectary none.

We have found this grass occasionally on the top of a very dry wall, in which case its leaves and stem are greatly diminished in size, and the roots become bulbous, with excessively long fibres. This seems to be what Hudson mistook for the real *A. bulbosus* figured in our last plate.

Dec.r 1. 1805. Published by J.r Sowerby, London.

AGROSTIS littoralis.

Sea-side Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx-glumes linear-lanceolate, awned. Corolla smooth, with a straight nearly terminal awn. Stems decumbent.

SYN. Agrostis littoralis. *Sm. Fl. Brit.* 78. *With.* 129? *Hull.* 18? *Dicks. H. Sicc. fasc.* 16. 1.

THIS curious *Agrostis*, distinguished from all other British species by its awned calyx, was first found in salt marshes near Cley, Norfolk, by the Rev. Mr. Bryant, in company with Mr. Rose and others, so long ago as August 1777. It was sent to Sir J. Banks and Dr. Solander, the latter of whom described and named it. Some of the original specimens are now before me; but that in the annexed plate was gathered by Mr. George Jackson, in August 1803, near the powder magazine 4 miles from Woolwich. Mr. Dickson found the same on the Essex coast. Dr. Withering has been very unfortunate in his information respecting this plant, and has figured and described for it the *Phleum crinitum* of *Fl. Brit.* which some person appears to have sent him from Wells.

The root is perennial, creeping and branched. Stems decumbent at their base, with bent joints, leafy, a little branched, smooth. Leaves sharp-pointed, flat, roughish. Stipula lanceolate, entire, slightly downy. Panicle erect, dense, branched and lobed. Flower-stalks rough, capillary, erect. Calyx-glumes nearly equal, linear-lanceolate, obtuse and notched, rough on the edges and keel, purplish upward, each terminating in a straight rough awn, scarcely so long as the glume itself. Corolla of two membranous, notched, nearly equal valves, much shorter than the calyx, the outermost tipped with a straight awn, various in length. The germen is accompanied by the cloven membranous glume, found in most grasses, and called by Linnæus a nectary.

Dec.1. 1809. Published by Jas Sowerby, London

POLYGONUM aviculare.

Knot-grass.

OCTANDRIA Trigynia.

GEN. CHAR. *Cal.* coloured, in 5 segments, permanent. *Seed* solitary, superior, angular, invested with the calyx. *Stam.* and *Pist.* uncertain in number.

SPEC. CHAR. Flowers axillary. Leaves elliptic-lanceolate, rough at the margin. Nerves of the stipulæ remote. Stem prostrate, herbaceous.

SYN. Polygonum aviculare. *Linn. Sp. Pl.* 519. *Sm. Fl. Brit.* 429. *Huds.* 171. *With.* 383. *Hull.* 86. *Relh.* 157. *Sibth.* 130. *Abbot.* 89. *Curt. Lond. fasc.* 1. *t.* 27. *Mart. Rust. t.* 91.

P. mas vulgare. *Raii Syn.* 146, and all the following, including *P. marinum*, 147.

A COMMON weed in all kinds of waste or even cultivated ground, especially in sandy or stony places, flowering all summer long. Birds feed on the seeds.

Root annual, long, very tough. Stems generally prostrate, much branched, various in length and luxuriance, tough, leafy, round, striated, glaucous or purplish, the branches greatly divaricated. Leaves alternate, elliptical or lanceolate, entire, obtuse, tapering at the base, smooth except at the margin, more or less glaucous. Stipulæ membranous, acute, often red, ribbed with a few remote nerves. Flowers axillary, clustered, on short stalks, small, but elegantly coloured with red, white, and green. Stamina 8, rarely 10, short and broad. Germen triangular, crowned with 3 very short styles. Seed black, polished.

Few plants vary more in luxuriance, breadth of leaves, or size of flowers. On the Cornish coast it is found very large and glaucous, when it becomes the *P. marinum* of Ray, but not the *maritimum* of Linnæus, which is still larger and more glaucous, with a perennial shrubby stem, and is essentially distinguished by the numerous parallel nerves of its large stipulæ.

Dec. 1. 1804. Published by Jas. Sowerby, London.

ANTIRRHINUM repens.
Creeping Pale-blue Toadflax.

DIDYNAMIA Angiospermia.

GEN. CHAR. *Cal.* in 5 segments. *Cor.* with a prominence at its base, pointing downwards and bearing honey. *Caps.* 2-celled.

SPEC. CHAR. Leaves linear, glaucous, whorled or scattered. Stem panicled. Calyx smooth, the length of the spur.

SYN. Antirrhinum repens. *Linn. Sp. Pl.* 854. *Sm. Fl. Brit.* 658. *Huds.* 272. *With.* 550. *Hull.* 139. *Sibth.* 414. *Dicks. Dr. Pl.* 75. *H. Sicc. fasc.* 17. 18.

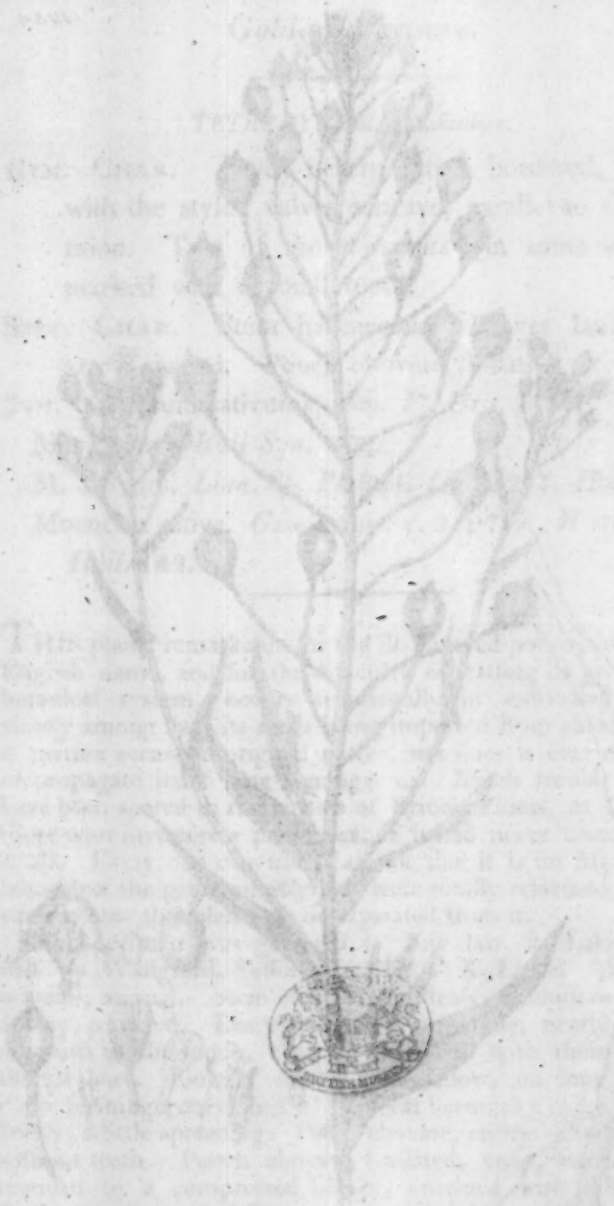
A. monspessulanum. *Linn. Sp. Pl.* 584.

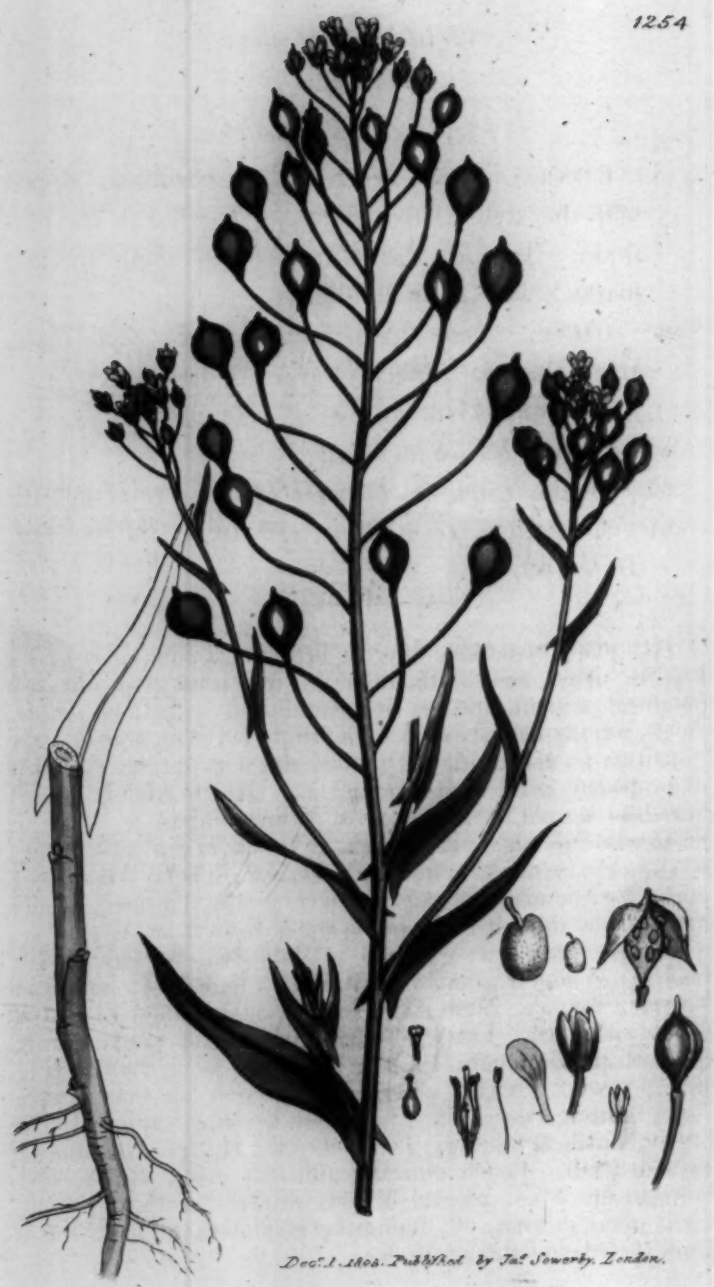
Linaria cærulea, foliis brevioribus et angustioribus. *Raii Syn.* 282: also L. odorata Monspessulana. *Ibid.*

A RARE inhabitant of chalky banks, hitherto observed in but few parts of our island. Ray had it from Cornwall (where it still grows) and from Hertfordshire. It abounds on Henley hill, Oxfordshire; and we are informed by the Rev. Mr. Butt and by Mr. Dillwyn that it is plentiful about Llandovery and Llangaddock, South Wales. It flowers from July to September, diffusing a very sweet fragrance in some states of the atmosphere, but not at all times.

The root is perennial, creeping much in the manner of *A. Linaria*, and throwing up numerous, erect, branched, round, leafy stems. Every part of the herbage is smooth and glaucous. Leaves narrow and entire, mostly scattered, but sometimes whorled. Flowers in panicled clusters, erect. Bracteæ small. Segments of the calyx lanceolate, smooth. Spur and lower lip of the corolla whitish; upper lip and tube striped with greyish blue; the spur is conical, shorter than the flower-stalk, and about as long as the calyx. Capsule globose. Seeds angular, rugged and black.

This plant has had the fate of being twice described by Linnæus and Ray. Such mistakes were very rarely made by the latter, nor often by the former when he did not trust to other people. He described *A. repens* after Dillenius, without seeing it, not knowing that it was his own *A. monspessulanum*. We prefer the first name as the most expressive.





Dec.1.1804. Published by Jas Sowerby, London.

ALYSSUM sativum.

Gold of Pleasure.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* nearly entire, bordered, tipped with the style: valves concave, parallel to the partition. Two of the *filaments* (in some species) marked with a small tooth.

SPEC. CHAR. Stem herbaceous. Leaves lanceolate, arrow-shaped. Pouch obovate, inflated.

SYN. Alyssum sativum. *Sm. Fl. Brit.* 679.
Myagrum. *Raii Syn.* 302.
M. sativum. *Linn. Sp. Pl.* 894. *Huds.* 277. *Hull.* 142.
Moenchia sativa. *Gmel. Syst. v.* 2. 971. *With.* 562. *Hull.* 142.

THIS plant, remarkable for the ill-founded pomposity of its English name, and for the difficulty of settling its genus in a botanical system, occurs accidentally in cultivated fields, chiefly among flax, its seeds being imported from abroad; for it neither seems an original native, nor does it ever establish or propagate itself long amongst us. Much trouble would have been spared to the writers of British Floras, at least to those who investigate principles, if it had never come hither at all. Every one can indeed decide that it is no *Myagrum*; but unless the genus of *Alyssum* were totally reformed, we do not see how this plant can be separated from it.

Our specimen was gathered in July last, in Lakenheath field by Wangford, Suffolk, by Mr. T. K. Eagle. The root is small, annual. Stem erect, round, leafy, smooth or a little downy, panicled. Leaves alternate, lanceolate, nearly entire, roughish to the touch, clasping the stem with their arrow-shaped base. Flowers small, pale yellow, on long simple stalks forming a corymbus which soon becomes a spike. Calyx bristly, a little spreading. Petals obovate, entire. Stamina all without teeth. Pouch obovate, inflated, erect, entire, surrounded by a compressed border, crowned with the style. Seeds many in each cell, roundish, pendulous on little stalks from the edge of the partition.

Jan.ʸ 1. 1804. Published by Jas. Sowerby, London.

LATHYRUS hirsutus.

Rough-podded Lathyrus.

DIADELPHIA Decandria.

GEN. CHAR. Style flattened, downy above, broadest upwards. Two upper segments of the *calyx* shortest.

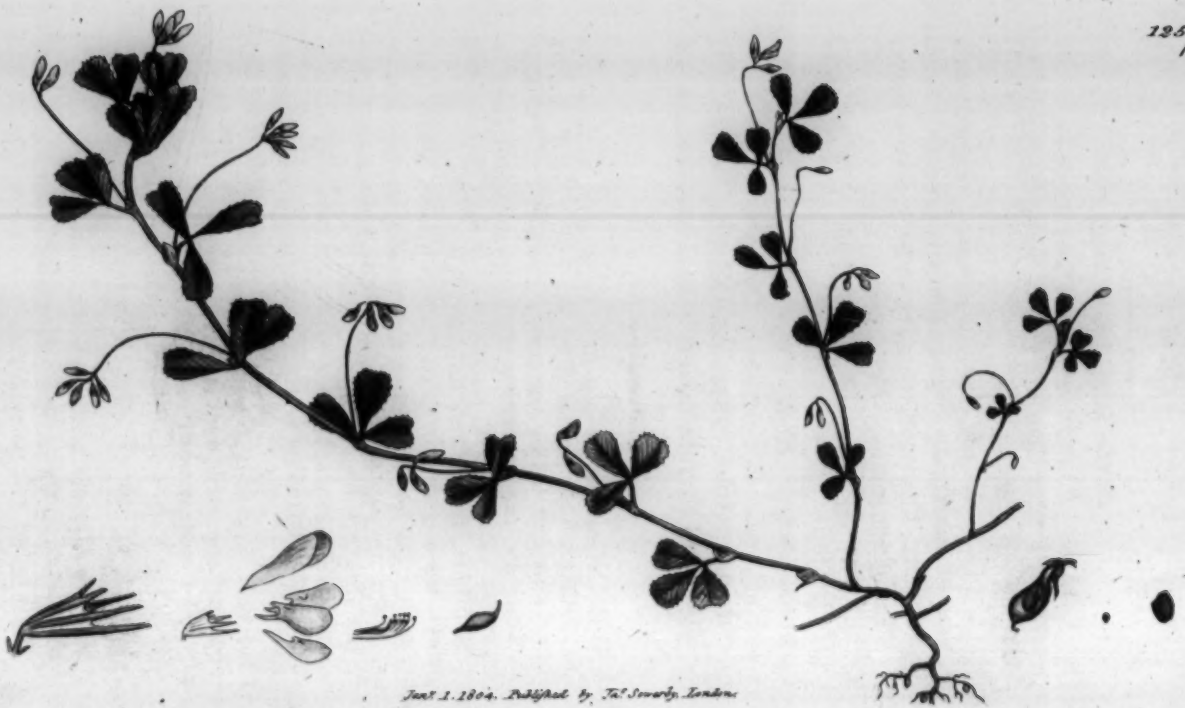
SPEC. CHAR. Stalks two-flowered. Tendrils bearing a pair of linear-lanceolate leaves. Pods hairy. Seeds rough.

SYN. Lathyrus hirsutus. *Linn. Sp. Pl.* 1032. *Sm. Fl. Brit.* 764. *Huds.* 315. *With.* 633. *Hull.* 160.
L. siliquâ hirsutâ. *Raii Syn.* 320.

WILD specimens of this rare plant have been sent us by the Rev. Mr. Francis, from the borders of cornfields at Rawreth and Hockley, Essex, where it flowers in July. Ray found it in several parts of that county. Mr. Swayne is quoted by Dr. Withering as having observed it between Bath and Bristol.

The root is annual. Stem climbing by means of long, branched, hairy tendrils, broadly winged, hairy. Leaves two on each tendril, linear-lanceolate, with three principal nerves, hairy, sometimes smooth. Stipulæ half-arrow-shaped, narrow, hairy. Flower-stalks reaching beyond the leaves, bearing one or two drooping flowers, rarely three. Calyx hairy. Petals elegantly variegated with bright crimson and white. Style short and broad, with a very blunt permanent stigma. The rough and hairy pods distinguish this from every other British *Lathyrus*. The seeds also are rough.

We have many more conspicuous garden species of this genus, or the present might be thought not unworthy of cultivation on account of the delicacy and brilliancy of its flowers. It is easily raised like other hardy annuals.



June 1. 1804. Published by Jas Sowerby, London.

TRIFOLIUM minus.

Lesser Yellow Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads hemispherical. Flower-stalks straight and rigid. Standard nearly smooth. Stems prostrate. Common footstalk shortest at the base.

SYN. Trifolium minus. *Relh.* 290.

T. filiforme β. *Sm. Fl. Brit.* 793. *With.* 655. *Hull.* 164.

T. procumbens. *Huds.* 328. *Curt. Lond. fasc.* 5. *t.* 53.

T. dubium. *Sibth.* 231. *Abbot.* 163.

T. lupulinum alterum minus. *Raii Syn.* 330. *t.* 14. *f.* 3.

ACCORDING to our promise in *v.* 14. *p.* 945, we now proceed to distinguish this plant from the real *T. filiforme*, to which we were first led by the accurate remarks of the Rev. Dr. Beeke, who has favoured us with specimens of both in various states. Indeed both are common in dry gravelly pastures, and flower throughout June and July.

T. minus has a small annual root, often furnished with little knobs, as in *Vicia lathyroides* and other diadelphous plants. Stems, when not supported, procumbent, round, somewhat hairy, but little branched, from 6 to 24 inches long; in the larger variety fig. 1, succulent and brittle, which is not the case in fig. 2; notwithstanding which Dr. Beeke agrees with us to consider them as merely varieties. Leaves on a very short general footstalk, the central leaflet elevated on a much more considerable partial stalk than in *T. procumbens*, *t.* 945, or in *T. filiforme*; which circumstance well characterizes the species before us. The leaflets of all the 3 species are obovate, emarginate and toothed; the stipulæ half-ovate. The flowers of both varieties of *T. minus* are from 12 to 15 on a straight stiff stalk. Flowers yellow; their standard not broad nor very perceptibly furrowed. Calyx-teeth extremely unequal, taper, hairy. Seed 1, rarely 2, in each pod.

Dr. Beeke has observed cows and sheep to be very fond of the luxuriant variety *f.* 1, and esteems it likely to be a most valuable plant for cultivation in upland pastures.

Trif. Lilac. Published by Jas. Sowerby, London.

TRIFOLIUM filiforme.

Slender Yellow Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads lax, of few flowers. Flower-stalks waved. Standard smooth. Stems prostrate. Leaflets all nearly sessile.

SYN. Trifolium filiforme. *Linn. Sp. Pl.* 1088. *Sm. Fl. Brit.* 792. *Huds.* 329. *With.* 655. *Hull.* 164. *Relh.* 290. *Sibth.* 231. *Abbot.* 164.

T. lupulinum minimum. *Dill. in Raii Syn.* 331. *t.* 14. *f.* 4.

TRIFOLIUM filiforme is common in gravelly pastures in various parts of England, often growing indiscriminately with the species in our last plate, and flowering at the same season.

The root is annual. The size of the plant often exceeds the smaller variety of *T. minus*, but, in Norfolk at least, it is generally smaller; like that, it is procumbent and very slender. Every part in general is smooth and without hairs, except a slight pubescence on the flower-stalks, and sometimes on the upper part of the stem. All the leaflets sessile, on a short common footstalk. Flowers on very slender, waved, seldom straight, stalks, from 3 to 8, on capillary partial stalks, longer in proportion than in the foregoing, and leaning one way. Pods but slightly recurved, laxly spreading, scarcely covered by the dried corolla, which in that state is of a whitish colour. When fresh the flowers are yellow. The standard is smooth, not furrowed. The calyx-teeth quite smooth, and less remarkably disproportioned than in *T. minus*.

Tab.ª 1. 1804. Published by Jas. Sowerby, London.

GRIMMIA verticillata.

Whorled Grimmia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of 16 teeth, broadest at their base. *Flowers* terminal. *Veil* cylindrical.

SPEC. CHAR. Leaves linear-lanceolate, acute, fasciculate as if whorled. Capsule ovate, truncate. Lid awl-shaped, curved.

SYN. Grimmia verticillata. *Sm. Fl. Brit.* 1191.

Bryum verticillatum. *Linn. Sp. Pl.* 1585. *Huds.* 485. *With.* 821. *Hull.* 259.

B. fasciculatum. *Dicks. Crypt. fasc.* 3. 3. *With.* 828. *Hull.* 261.

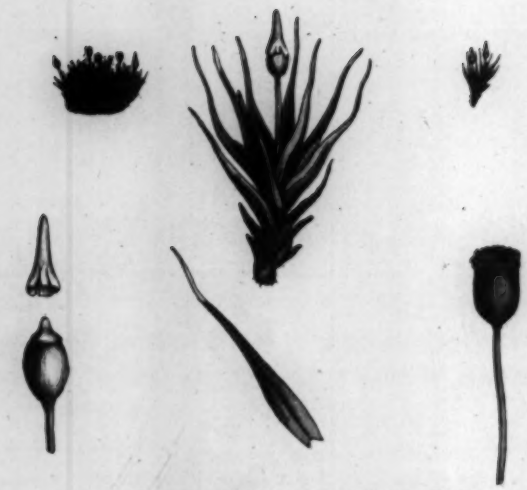
B. pilosum verticillatum. *Dill. Musc.* 374. *t.* 47. *f.* 35.

B. trichoides brevifolium, angustis cauliculis, capitulis erectis parvis et minùs aduncis. *Dill. in Raii Syn.* 98.

OUR specimens of this rare and much-controverted moss, which appears to be scarcely known to botanists out of Britain, were gathered by Mr. Turner on rocks by the sea near Bangor, where Brewer formerly, and the Rev. H. Davies in later days, have observed it. Its natural situation is in springs on a calcareous soil, the water often encrusting it with the earth which it deposits in running. The late Mr. Davall found the same in Switzerland.

The stems form dense tufts, an inch or two high, and are branched, erect and leafy. Leaves imbricated, rather spreading, fasciculate, or interrupted here and there, so as to look whorled, which they very imperfectly are in fact: they are linear-lanceolate, entire, single-ribbed, beardless, of a pleasant light green, often a little glaucous. Fruit-stalks solitary, soon becoming lateral, erect, twisted by drying. Capsule erect, small, ovate, short, wide-mouthed, polished, reddish-brown. Fringe red, decumbent in drying. Lid conical, tapering, curved, shorter than the capsule.

There is great difficulty in knowing this from *Gymnostomum curvirostrum* of Hedwig and *Fl. Brit.* which exactly resembles it in habit, place of growth, calcareous incrustation, and colour, but differs essentially in the want of a fringe, as well as in having a longer lid.



Tune 1. 1804. Published by Jas Sowerby, London.

GRIMMIA Donniana.

Bearded Alpine Grimmia.

CRYPTOGAMIA Musci.

GEN. CHAR. *Fringe* simple, of 16 teeth, broadest at their base. *Flowers* terminal. *Veil* cylindrical.

SPEC. CHAR. Leaves lanceolate, acute, hair-pointed. Capsule elliptical. Fringe not pierced. Lid straight.

SYN. Grimmia Donniana. *Sm. Fl. Brit.* 1198.

THE name of this new moss is intended to preserve the memory of its original discoverer Mr. George Donn, a great contributor to this work and to the *Flora Britannica*, who gathered it on large stones near a water-fall on a mountain in Angusshire, 18 miles to the north of Forfar. Mr. Turner has also found it on old pales at Beddgelart, North Wales, and from his specimens we have delineated it.

In habit it much agrees with some species of *Orthotrichum*, but the veil and fringe are those of a *Grimmia*. Indeed the beautiful *Grimmia cribrosa* of Hedwig is nearly related to it, differing chiefly in having a nearly sessile capsule, with a wider mouth, and the teeth most curiously pierced full of holes.

The stems of ours are short, scarcely branched, growing in dense tufts, clothed with erect imbricated leaves, of a lanceolate pointed form, keeled, entire, each tipped with an upright white hair. Fruit-stalk terminal, straight, shortish, slender, of a pale green. Capsule erect, elliptical, smooth, brown, at length black; its mouth not much dilated. Lid convex, with a short, straight, blunt beak. Fringe red. Veil tipped with brown.

Jan.ª 1. 1804. Published by Jas. Sowerby, London.

HYPNUM denticulatum.

Sharp Fern-like Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Leaves two-ranked, ovato-lanceolate, acute, entire, without a nerve. Capsule cylindrical, drooping. Lid conical.

SYN. Hypnum denticulatum. *Linn. Sp. Pl.* 1588. *Hedw. Sp. Musc.* 237. *Crypt. v.* 4. 81. *t.* 31. *Huds.* 494. *With.* 843. *Hull.* 267.

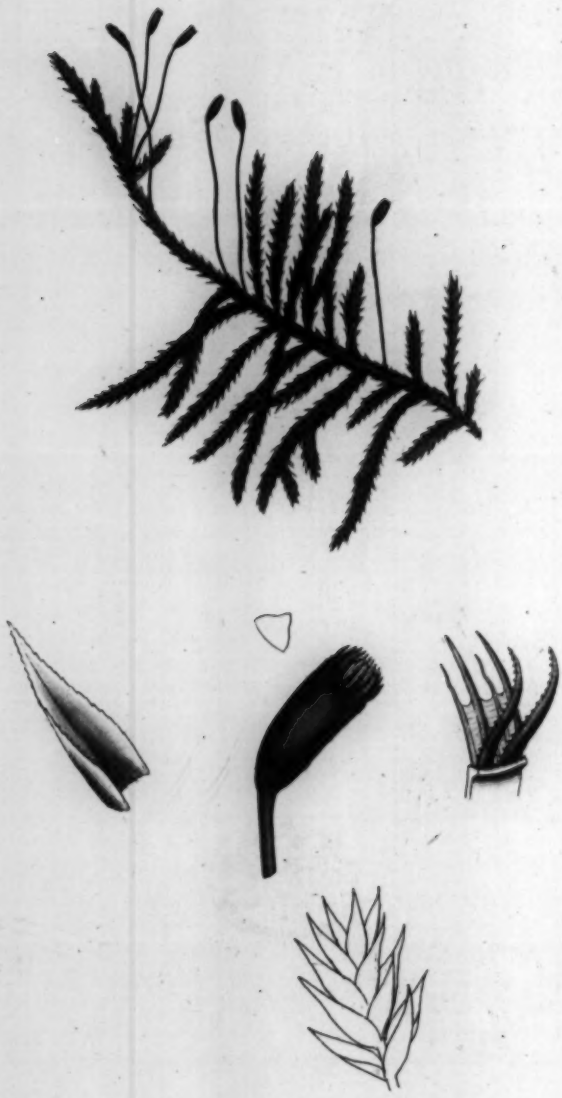
H. denticulatim pennatum, pinnulis duplicatis recurvis. *Dill. Musc.* 266. *t.* 34. *f.* 5.

H. repens filicifolium non ramosum, pediculis et capitulis longioribus ad radicem egredientibus, foliolis utrinque duplicatis. *Raii Syn.* 88.

FOUND in shady rather moist places, bearing its fruit in March and April.

The root is perennial. The stems form tufts, and are either upright or spreading, at first simple, bearing the fruit-stalk at their base; but by age (as it seems) they grow more or less branched, and decumbent, with the fructification situated about the middle of the stem, or at the base of each branch. In this state it becomes the *H. sylvaticum* of authors, *Dill. t.* 34. *f.* 6, a plant about which there has been much uncertainty; but we assent to the opinion of Hedwig, confirmed by Mr. Turner, that it is not distinct from *H. denticulatum*.

The leaves are pale-green, a little shining, reticulated, imbricated principally in two rows, so as to render the branch flat; they are ovate-lanceolate, acute, entire, without a nerve, compressed at the base. Fruit-stalk red and shining. Capsule a little drooping, cylindrical, smooth, pale brown. Fringe yellow. Lid conical, more or less pointed.



June 1. 1804. Published by Jas Sowerby, London.

HYPNUM crenulatum.

Crenate Feather-moss.

CRYPTOGAMIA Musci.

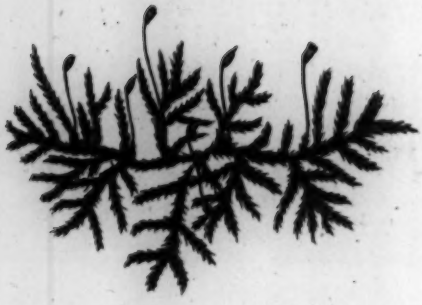
GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches mostly simple. Leaves imperfectly two-ranked, ovate, acute, finely notched, single-nerved. Lid conical.

SYN. Hypnum crenulatum. *Sm. Fl. Brit.* 1289.

GATHERED near Newcastle by Mr. Winch. We are obliged to Mr. Turner for specimens, as well as for pointing out the characters which indicate it to be a species hitherto nondescript.

It is perennial, and appears to grow on rotten wood or decayed bark of trees. It is next akin to *H. denticulatum*, but larger in size and darker in colour. The stems creep to some extent, throwing up numerous, spreading, mostly simple branches. Leaves imbricated in two principal rows, but less exactly than in the last, shining, ovate, sharp-pointed, but little concave, not reticulated, minutely crenate, except at the base, furnished with a central nerve, which scarcely reaches to the point. Stalks red and shining, from a pale sheath. Capsule drooping and at length somewhat curved, of an elliptic-cylindrical figure, brown, darker at the base. Lid conical. Fringe reddish brown.



Jan.ʳʸ 1. 1844. Published by Sir Jas. Smith & Longman

HYPNUM serrulatum.

Serrulated Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem much branched, creeping. Leaves ovato-lanceolate, sharp-pointed, serrated, with a single nerve at the base. Lid awl-shaped.

SYN. Hypnum serrulatum. *Hedw. Sp. Musc.* 238. *t.* 60. *Sm. Fl. Brit.* 1290.

WE are also obliged for specimens of this moss to Mr. Turner, who in the progress of his work on Irish Mosses has kindly communicated to us many observations, especially every fact which could only be ascertained by the authentic Hedwigian specimens in his collection.

The *H. serrulatum* was received by the celebrated Hedwig from Pennsylvania. Our specimens were gathered in Ireland by Dr. Scott; nor is it very wonderful that an American plant should be found in that country, whose moist climate moreover renders it fertile in mosses.

The roots appear to be perennial. With the time of its fructifying we are not acquainted. It is smaller than the foregoing species, and much more branched. The leaves are more or less perfectly two-ranked, deep-green, not shining, ovato-lanceolate with a taper point, obscurely reticulated, unequally and finely serrated, furnished with a central nerve which reaches only about half way from their base. Stalks red and shining. Capsule drooping, ovate-oblong. Lid awl-shaped, by which this species is, as well as by the leaves, clearly distinguished from the two last. Fringe of a rusty red.

Mr. Turner, on the authority of a specimen just received from Mr. Dickson, thinks this moss may not be distinct from his *H. confertum*.

Jan.ʸ 1. 1804. Published by Ja.ˢ Sowerby, London.

LICHEN luteus.

Yellow-shielded Crustaceous Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

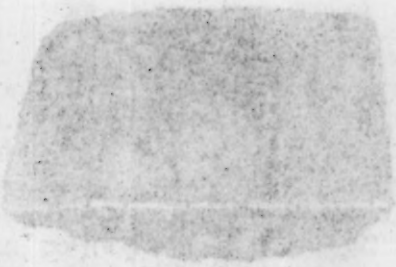
SPEC. CHAR. Crust powdery, pale ash-coloured. Shields flattish, deep yellow, with a yellow border.

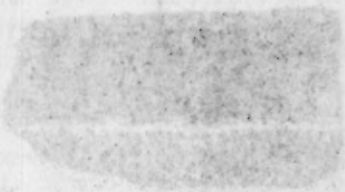
SYN. Lichen luteus. *Dicks. Crypt. fasc.* 1. 11. *t.* 2. *f.* 6. *Ach. Prod.* 42. *With. v.* 4. 25. *Hull.* 292. Parmelia lutea. *Ach. Meth.* 179.

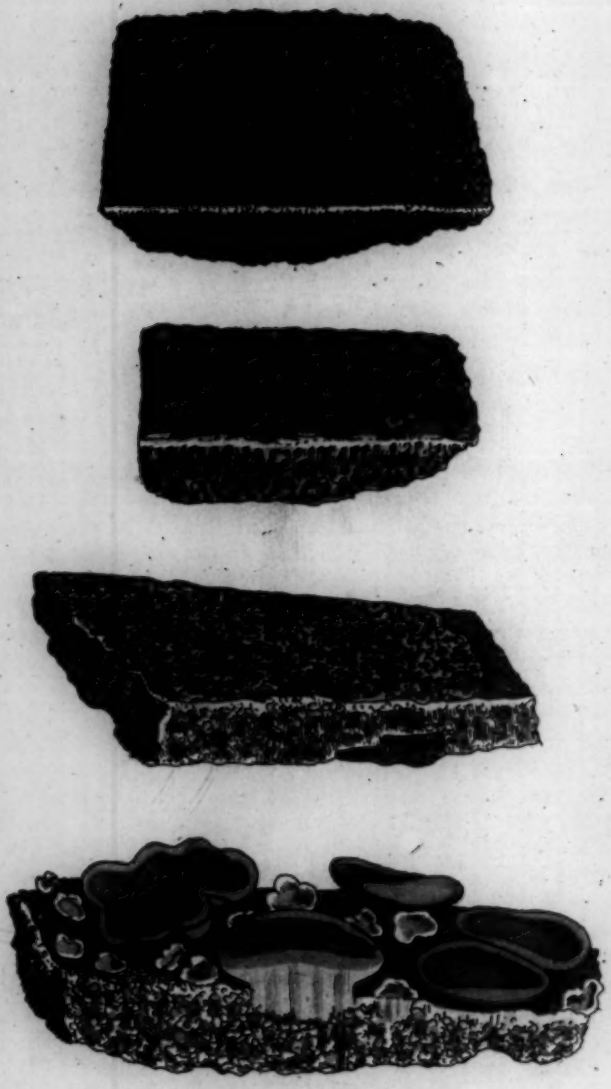
THIS is a rare and little-known species. It was collected by Mr. Turner in a wood near Bangor. Mr. Dickson, its first describer, has observed it on the mossy trunks of trees. In Mr. Turner's specimens it grows on the bark itself.

The crust is mealy, sometimes very thin and scattered; sometimes more dense, and in that case green within. Its colour externally is a pale grey or ash-colour. The shields are numerous, rather small, sessile, with a flattish smooth disk of a full yellow, more verging towards the orange than the lemon. Their border elevated, more or less deeply coloured like the disk.

Dr. Acharius in his new *Methodus Lichenum* observes, that he does not doubt his plant being right, though he finds the shields smaller than in Mr. Dickson's figure. Our specimens confirm the accuracy of his remark; but we can also speak to the correctness of that figure, the shields being, as we apprehend, larger in proportion as the crust is more dispersed, from growing on moss instead of bark.







Jan.ª 1. 1804. Published by Jas. Sowerby, London.

LICHEN polytropus.

Many-coloured Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts. Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tessellated, smooth, greenish sulphur-coloured, and black. Shields numerous, convex, bordered, angular, yellowish flesh-coloured, turning to olive, dark purple and black.

SYN. Lichen polytropus. *Ehrh. Crypt.* 294. *Ach. Prod.* 72. *Dicks. Crypt. v.* 4. 22.

L. atro-virens. *Wulf. in Jacq. Coll. v.* 2. 186. *t.* 14. *f.* 2.

Lecidea polytropa. *Ach. Meth.* 72.

Patellaria polytropa. *Hoffm. Pl. Lich. v.* 3. 11. *t.* 58. *f.* 2.

THE first observer of this Lichen in Britain was the Rev. Mr. Stuart of Luss, who in 1782 favoured us with specimens on a micaceous stone from the mountains of Breadalbane. In 1784 Mr. Burgess of Kirkmichael found the same abundant on sand-stones on the moors of Dumfries-shire. Mr. Robson and the Rev. Mr. Harriman have since sent it from Durham on various stones of the granite kind. The gentleman last named seems most perfectly acquainted with the many different appearances to which it is liable in the colour of its shields, and which led Ehrhart to give it the name of *polytropus*. The specimen in our plate precisely accords with the authentic one in his *Pl. Crypt. Exsiccatæ*.

The crust is inseparable from the stone, hard, formed of very smooth, pale sulphur-coloured, angular portions, various in size, sometimes as minute as the finest sand, all more or less bordered or accompanied by a black substance, which we suspect to be the decayed crust of the preceding year. It is similar to what makes the black lines of *L. geographicus*. Shields very numerous, generally larger than the portions of the crust; when young roundish, concave, of a pale waxy greenish yellow, with a thick smooth border of the same colour. They soon grow very convex, of a buff inclining to flesh-colour, angular and rugged, and the margin is less apparent. By age, or rather by accident, they become olive-green, black, and sometimes, though rarely, of a dark dull purplish brown.

Hoffman's figure expresses their usual form and colour without this variation. In the darkest state, this is *L. intricatus, Schrad. Journ.* 1801, *p.* 1. 72.

June 1. 1814. Published by Jas. Sowerby, London.

POA nemoralis.

Wood Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle and leaves slender. Spikelets lanceolate, of about three flowers. Glumes acute, obsoletely five-ribbed. Stipula very short, notched.

SYN. Poa nemoralis. *Linn. Sp. Pl.* 102. *Sm. Fl. Brit.* 106. *With.* 146. *Hull.* 22. *Relh.* 34. *Sibth.* 43. *Abbot.* 19.

P. angustifolia β. *Huds.* 41.

β. P. angustifolia α. *Huds.* 40.

P. pratensis, var. 2. *With.* 142. *Hull.* 21.

IN the north of England scarcely any wood or grove can be found in which this grass does not compose the tall thin herbage under the trees, in which situations it thrives well. In the south it is less frequent, but abounds in Charlton wood, and other places on a chalky soil, flowering in July and August.

The root is perennial, very slightly creeping. Stems several, erect, a foot and half high, slender, flattish, striated, smooth. Leaves almost all growing on the stem, narrow, taper-pointed, striated, rough to the touch, except the under side of the lower ones. Sheaths shorter than the leaves, compressed, smoothish, each crowned with a very short notched stipula. Panicle nearly upright, loose, slender, rough and zigzag. Spikelets small, lanceolate, acute, purplish and a little shining, smooth, except the keel of the calyx towards the top. Florets from 2 to 4, lanceolate, obscurely 5-ribbed, silky at their back, and hairy at their base, but not connected by long complicated threads.

The variety β, which Mr. Hudson, we know not why, made the original species, is a stouter plant, more like *P. pratensis* and *trivialis*, but differing from them in essential characters.

Dec.r 1. 1814. Published by Jas. Sowerby London.

AVENA strigosa.

Bristle-pointed Oat.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle oblong, its branches pointing one way. Florets two in each calyx; their outer valves tipped with a double bristle.

SYN. Avena strigosa. *Schreb. Lips.* 52. *Retz. Obs. fasc.* 1. 11. *With.* 166. *Hull.* 26. *Willden. Sp. Pl. v.* 1. 446. *Host. Gram. v.* 2. 41. *t.* 56.

ALTHOUGH Dr. Withering had admitted this on the list of British plants, I left it out of the *Flora Britannica*, conceiving his specimen to have sprung from some accidental importation of foreign seed. Since that time, however, we have had such authentic information from Mr. Brodie, the Rev. H. Davies, Mr. Robson, Mr. E. Forster, and other friends, of its being a common weed in corn-fields in Scotland, Wales, Yorkshire, and even on the downs of Cornwall, that it seems to have a good claim to be reckoned among our natives. It is annual, flowering in July.

It resembles the common Cultivated Oat in general habit and size; but the panicle when it comes forth shows a striking difference, being oblong and somewhat crowded, its branches all leaning to one side. The essential difference resides in the outer glumes of each floret being each tipped with two straight, prominent, reddish, rough bristles, over and above the great awn at the back; which circumstance gives the whole panicle a remarkably bristly or *strigose* appearance. The florets, naturally 2 in each calyx, vary to 3 or 4.

Feb.ʳ 1. 1804. Published by Jas. Sowerby, London.

HEDERA Helix.

Common Ivy.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* of 5 teeth. *Petals* 5, broadest at the base. *Berry* encompassed with the calyx, containing *5 seeds.*

SPEC. CHAR. Leaves some ovate, some lobed.

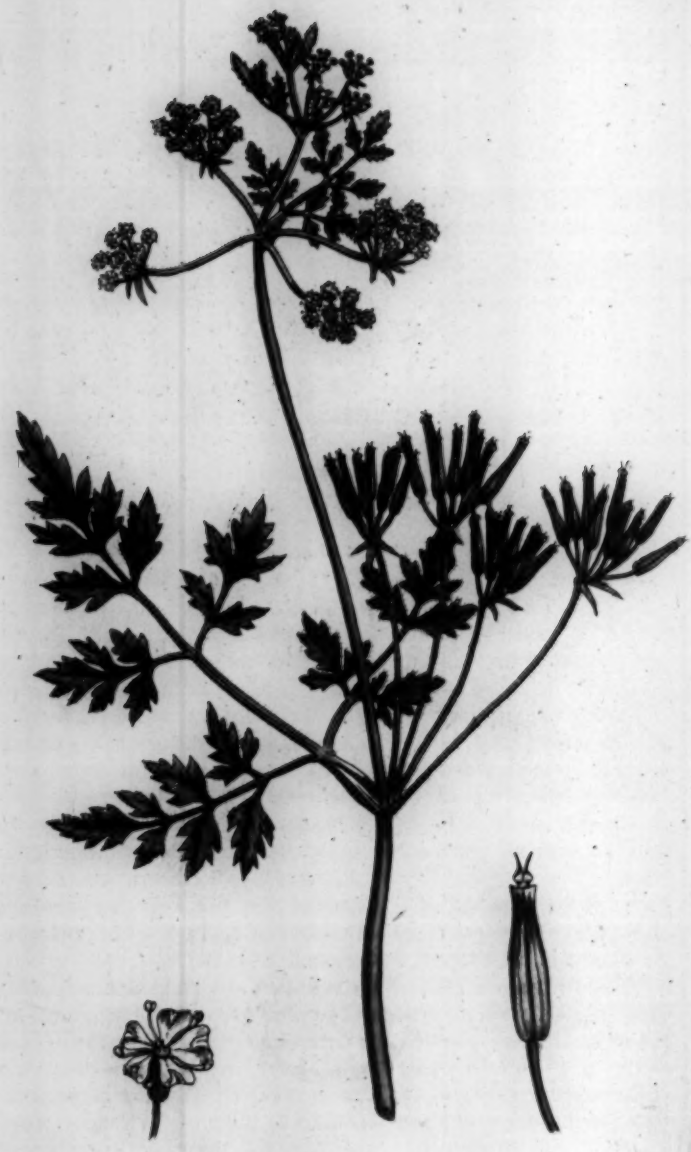
SYN. Hedera Helix. *Linn. Sp. Pl.* 292. *Sm. Fl. Brit.* 267. *Huds.* 100. *With.* 267. *Hull.* 54. *Relh.* 97. *Sibth.* 85. *Abbot.* 53. *Curt. Lond. fasc.* 1. *t.* 16.

H. communis major et minor. *Raii Syn.* 459.

EVERY one is acquainted with the Ivy, so common and so picturesque upon old walls, and the trunks of aged trees, whose heads it frequently overtops, finally overwhelming its supporters altogether. Nor does it less commonly creep on the ground in dark woods, forming an evergreen carpet. It is the latest of all our flowering plants, blossoming in October and November, and ripening its berries in the spring.

The stem and branches are long and flexible, a little compressed, creeping, and closely attached to the tree or wall, which supports them, by innumerable short fibres, which, however, do not afford them any nourishment; for every day's experience shows that Ivy is easily killed by cutting the stem above the root. The upper branches spread in every direction, and are round and smooth. The leaves are evergreen, of a dark hue, beautifully veined with white, and somewhat shining: the lowermost five-lobed, the uppermost ovate; all entire and supported by footstalks. Flowers numerous, in umbels, several of which together form a corymbus. Stalks slightly clothed with starry down. Germen urn-shaped, encompassed by the 5 teeth of the calyx. Petals green, reflexed. Stamina erect. Style very short, with a simple stigma. Berry globular, black, mealy within.

The whole plant partakes of a peculiar aromatic flavour. From the old stems, when bruised, a very fragrant resin exudes. Mr. Curtis recommends this plant to be trained into a head as a standard ever-green; he also mentions that sheep are very fond of the leaves.



Feby 1. 1804. Published by Jas Sowerby, London.

SCANDIX Cerefolium.

Garden Chervil.

PENTANDRIA Digynia.

GEN. CHAR. *Gen. involucrum* none. *Flowers* radiant. *Petals* notched. *Fruit* awl-shaped. *Central flowers* often male.

SPEC. CHAR. Seeds polished, a little swelling. Umbels sessile, lateral.

SYN. Scandix Cerefolium. *Linn. Sp. Pl.* 368. *With.* 307. *Hull.* 63. *Jacq. Fl. Austr. v.* 4. 47. *t.* 390.

Cerefolium vulgare sativum. *Ger. em.* 1038.

THIS plant is in the same predicament with *Avena strigosa*, *t.* 1266. Dr. Withering mentioned it in his work, from Dr. Stokes's having found it about Worcester. It appeared too probably to have escaped from gardens, where it is sometimes cultivated for sallads and soups, to find a place in the *Flora Britannica*. Mr. Wigg and Mr. Turner having observed it, to all appearance wild, and in great plenty, on a bank near Halesworth, Suffolk, in June 1803, and sent us the specimen in the annexed plate; we have determined to publish it. Future observers may decide whether it be truly indigenous or not. The umbelliferous tribe are so often but casually inspected, and many of them are so much alike, that this *Scandix* may possibly have been overlooked for the *Anthriscus*, *t.* 818, which grows in similar situations.

The root is annual. Herbage pale green, shining, delicate and tender, with an aromatic sweetish flavour. Stem branched, round, hollow, striated, a little hairy about the joints only. Leaves spreading, bipinnate and cut, with hairy stalks. Umbels sessile, opposite to the leaves, of about 4 general rays, the partial ones of about 10 or 12, all more or less woolly. Partial involucrum of a few sharp lateral leaflets. Flowers perfectly white. Fruit tapering, furrowed, smooth and polished.

In France this plant often makes a principal ingredient in sallads, and is of much more general use than with us.

Feb.ª 1 1804. Published by Jas. Sowerby, London.

STELLARIA scapigera.

Many-stalked Stitchwort.

DECANDRIA Trigynia.

GEN. CHAR. *Cal.* 5-leaved, spreading. *Petals* 5, deeply cloven. *Caps.* superior, of 1 cell, with 6 teeth at the orifice. *Seeds* numerous.

SPEC. CHAR. Stem shorter than the flower-stalks. Leaves linear-lanceolate, rough-edged. Calyx three-nerved, the length of the petals.

SYN. Stellaria scapigera. *Willden. Sp. Pl. v.* 2. 716.

WILD specimens of this new and curious *Stellaria* have been obligingly communicated to us by Mr. G. Donn, who gathered them at different times, from the year 1794 to 1803, on the sides of rivulets in Perthshire, and about Loch Nevis, Invernessshire. The plant was received by the younger Linnæus from the Kew garden with the apt name of *scapigera*, but does not appear in the *Hortus Kewensis* of Mr. Aiton. A specimen having come to the hands of Professor Willdenow, he has described it in his *Sp. Pl.*, but its native country was altogether unknown till Mr. Donn's fortunate discovery.

It is perennial, but of the precise time of its flowering we are not informed. The stems are very short, tufted, thickly clothed with numerous, opposite, linear-lanceolate, acute leaves, rough on the edges, but otherwise smooth, each having a single rib, very thick at the base, tapering and vanishing towards the point. Numerous long square smooth stalks spring from the bosoms of the upper leaves, rising high above the stem, mostly simple, and each bearing a white flower, whose calyx-leaves have 3 ribs, a membranous edge, and are about as long as the petals. Antheræ red. The leaves turn red in decay, and remain long on the stem. We do not find them 3-ribbed, nor is the plant *acaulis* as described in Willdenow.

Feb.ʸ 1. 1804. Published by Jas Sowerby, London.

AJUGA pyramidalis.

Pyramidal Bugle.

DIDYNAMIA Gymnospermia.

GEN. CHAR. Upper lip of the *Corolla* very minute, and much shorter than the stamina.

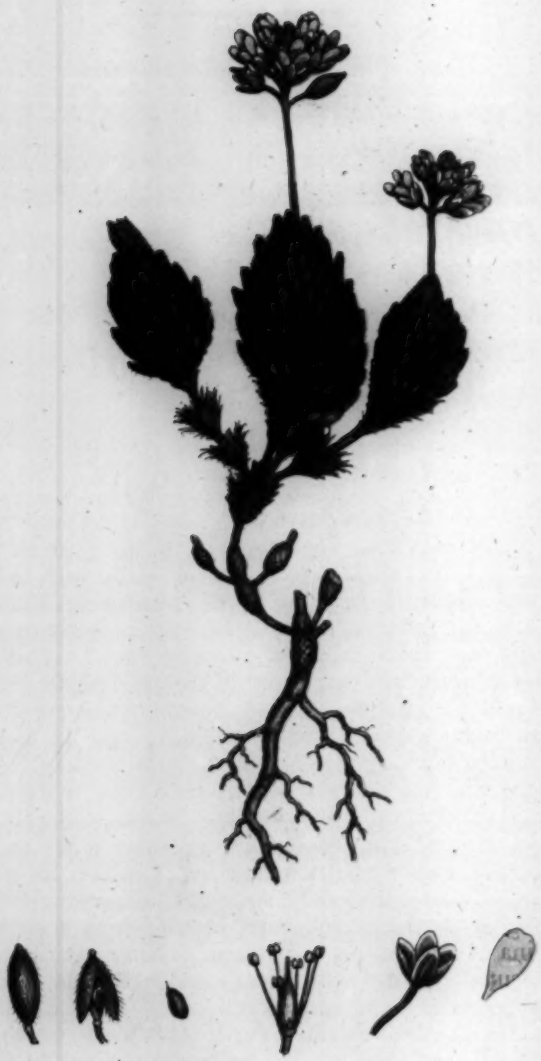
SPEC. CHAR. Hairy. Whorls crowded into a pyramidal form, many-flowered. Radical leaves very large, obovate, crenate, obtuse.

SYN. Ajuga pyramidalis. *Linn. Sp. Pl.* 785. *Lightf.* 302. *With.* 516. *Hull.* 131. *Fl. Dan. t.* 185.

THE doubt expressed in *p.* 477 of this work, whether *A. pyramidalis* be really found in Britain as reported in the *Fl. Scotica*, is now removed by the fine wild specimens for which we are obliged to J. Brodie, Esq. of Brodie. They were gathered on Tore Aichaltie, a hill near Brahan castle, the seat of Lord Seaforth, by Mr. Wm. Gibb, his Lordship's gardener, being in full flower in May or June.

Root perennial, of many long fibres. Whole herb more or less hairy. Stem square, from 2 to 5 inches high. Leaves several, radical, on stalks, large, obovate, obtuse, slightly crenate, often reddish. Whorls several, crowded, of many flowers, accompanied by large, pale-purple, obtuse, notched *bracteæ*, giving the plant a very handsome appearance. The corolla is purple, variegated with darker streaks and a yellow palate.

This is probably the species which Dr. Burgess found, as mentioned by Lightfoot, and certainly the plant of Linnæus and *Fl. Danica* to which the latter refers; but the synonyms of Petiver and Rivinus belong to *A. alpina*.



Feb. 1. 1804. Published by Jas. Sowerby, London.

DRABA aizoides.

Yellow Alpine Whitlow-grass.

TETRADYNAMIA Siliculosa.

GEN. CHAR. *Pouch* entire, long-oval: valves flattish, parallel to the partition. *Style* scarcely any.

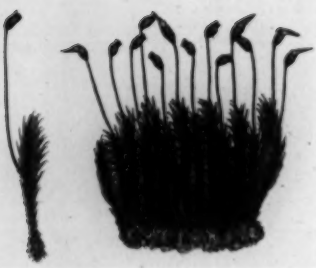
SPEC. CHAR. Stalk naked. Leaves lanceolate, rigid, keeled, strongly fringed. Petals notched, twice as long as the calyx.

SYN. Draba aizoides. *Linn. Mant.* 91. *Willden. Sp. Pl. v.* 3. 424. *Jacq. Fl. Austr. v.* 2. 55. *t.* 192. *Curt. Mag. t.* 170.

THIS new and very interesting addition to our stock of native plants was discovered by Dr. Wm. Turton, in March 1803, growing wild abundantly on walls and rocks about Pennard Castle, 8 miles west of Swansea in South Wales. The Doctor informs us that the castle is surrounded with sands, almost inaccessible, and cannot have been inhabited for some centuries, and that many of the aged plants grow far out of all possible reach.

The roots are perennial, branched, bearing many round tufts of crowded, linear-lanceolate, rigid, shining leaves, with a strong rib, and more or less keeled; their margin strongly fringed with white bristly hairs. Stalks solitary, terminal, simple, naked, stiff, round and smooth, about an inch and half high. Flowers numerous, corymbose, of a bright golden yellow. Calyx-leaves broad, elliptical, concave. Petals twice as long as the calyx, obovate, obtuse, with a slight notch. Stamina not projecting. Antheræ yellow. Pouch elliptical, flat, acute, crowned with a longer style than is usual in this genus. Seeds several in each cell.

As this *Draba* blossoms so early as March, continuing till the end of April, and is of so brilliant and singular an appearance, nothing can be more desirable for decorating rock-work and dry barren situations. It is accordingly not unfrequent in gardens, where it forms large tufts without any care, and bears our severest winters.



Pub.d 1 1804. Published by Jas. Sowerby, London

DICRANUM heteromallum.

Silky Heath Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem generally simple. Leaves capillary, leaning one way, single-nerved, dilated at the base. Capsule obovate, gibbous.

SYN. Dicranum heteromallum. *Sm. Fl. Brit.* 1204. *Hedw. Sp. Musc.* 128. *Crypt. v.* 1. 68. *t.* 26. *Sibth.* 282.

Bryum heteromallum. *Linn. Sp. Pl.* 1583. *Huds.* 484. *Hull.* 263. *Abbot.* 240. *Dicks. H. Sicc. fasc.* 12. 23. *Dill. Musc.* 375. *t.* 47. *f.* 37.

B. trichoides, reclinatis cauliculis, capitulis erectis acutis. *Raii Syn.* 96.

Mnium heteromallum. *With.* 801. *Relh.* 418.

HARD gravelly walks in woods, broken shady banks, and such kind of dry situations, produce this moss in abundance. In the winter and spring it sometimes forms a wide-extended velvet carpet of a vivid green, and in texture like the softest silk. The capsules are plentiful in spring, and continue during some part of the summer, especially if the season be moist.

Root probably annual. Stems erect, mostly undivided, leafy, about half an inch high. Leaves all curved towards one side, long, soft and flexible, capillary, gradually dilated towards the base, in which part a strong rib is visible. Fruit-stalks solitary, about an inch high or more, capillary, twisting, yellow or brownish. Capsule of a shining chesnut colour, obovate, gibbous on one side, which seems to occasion its inclined position. Lid with a fine taper curved point as long as the capsule. Fringe red, large and ornamental.

Feb. 1. 1804. Published by J.t Sowerby, London.

DICRANUM subulatum.

Awl-leaved Fork-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* oblong. *Fringe* of 16 flat, cloven teeth, a little inflexed.

SPEC. CHAR. Stem simple. Leaves slender-awlshaped, leaning one way, dilated at the base. Capsule ovate, slightly furrowed, drooping.

SYN. Dicranum subulatum. *Hedw. Sp. Musc.* 128. *t.* 34. *f.* 1—5. *Sm. Fl. Brit.* 1206.

SPECIMENS of this moss gathered at the village of Rathmines near Dublin by Dr. Whittley Stokes, and sent to Mr. Turner, are our authority for introducing it as indigenous among us. They have been compared with original ſpecimens of Hedwig, the only author who has described the *Dicranum subulatum*:

This species is annual, ripening its fruit in the autumn. Stems erect, simple, straight, leafy, blackish, from a quarter to half an inch in height. Leaves dull brownish or yellowish green, curved to one side, thick set, of a very slender awl-shaped figure, acute, single-ribbed, broadest at the base, entire. Stalk capillary, red, somewhat more than half an inch high. Capsule cylindrical inclining to ovate, curved and a little drooping, when old dark brown and obscurely furrowed; at least so we have found it in some specimens, but on examination of others, this last character does not seem to be constant. Fringe red. Lid awl-shaped, curved, as long as the capsule. The fruit has nothing of the urn-like figure of *D. varium* and *rufescens*.

Feb.ry 1. 1804. Published by Jas. Sowerby, London.

HYPNUM medium.

Long-headed Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem creeping. Branches scattered. Leaves ovato-lanceolate, acute, single-nerved, imbricated. Capsule cylindrical, slightly elliptical, erect.

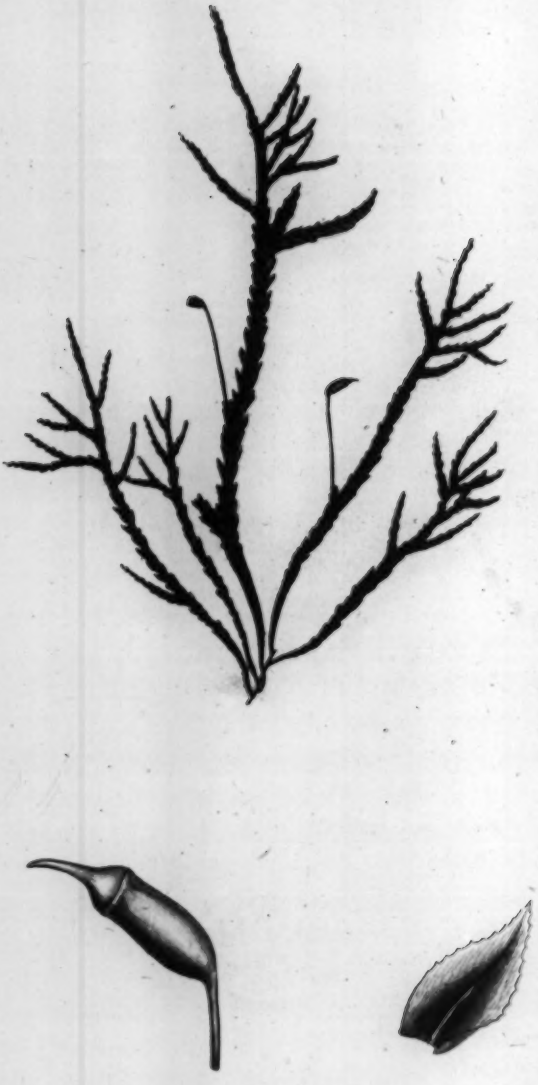
SYN. Hypnum medium. *Dicks. Crypt. fasc.* 2. 12. *Sm. Fl. Brit.* 1281. *With.* 847. *Hull.* 269.

H. trichodes, capsulis oblongis in setis brevioribus. *Dill. Musc.* 331. *t.* 42. *f.* 65.

Leskea polycarpa. *Hedw. Sp. Musc.* 225.

MR. DICKSON discovered this *Hypnum* on the trunks of trees in Scotland, and Mr. Templeton has observed it in Ireland upon stones. Our specimens, the only English ones we have ever seen, were gathered by the Rev. Dr. Abbot about the roots of young oaks in Kempston wood Bedfordshire, bearing ripe fruit in the winter months.

The stems form perennial intricate patches, and divide irregularly into many slender branches, which are also procumbent, and which are sometimes thicker in their upper part than any where else. Leaves of a bright but full green, not shining, imbricated every way, small, ovato-lanceolate, acute, entire, concave, with a strong nerve. Stalks very numerous, erect, capillary, not an inch high. Capsule erect, pale brown, long, cylindrical, a little swelling, sometimes curved at the top, but not drooping. Lid conical, short and blunt. Inner fringe with very slender uniform teeth, twice as long as the outer.



Pub.d 1. 1804 Published by Jas. Sowerby, London.

HYPNUM ruscifolium.

Long-beaked Water Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem branched. Leaves ovate, acute, minutely serrated, single-ribbed, imbricated, obscurely two-ranked. Lid awl-shaped.

SYN. Hypnum ruscifolium. *Dicks. Crypt. fasc.* 3. 10. *Sm. Fl. Brit.* 1292. *With.* 848. *Hull.* 269. *Relh.* 433. *Sibth.* 297. *Abbot.* 246.

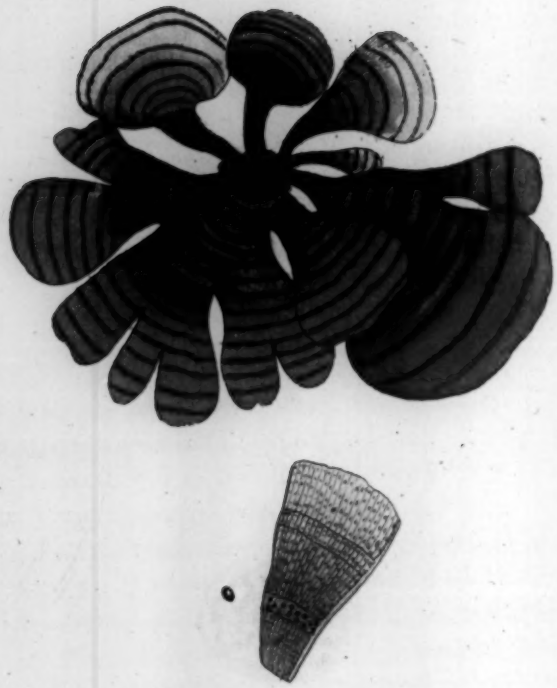
H. rutabulum δ. *Huds.* 497.

H. riparioides. *Hedw. Sp. Musc.* 242. *Crypt. v.* 4. 10. *t.* 4.

H. foliis rusciformibus, capsulis subrotundis. *Dill. Musc.* 298. *t.* 38. *f.* 31; and *t.* 40. *f.* 44, A.

NOT rare on stones, posts and mill-wheels in rivers, bearing fruit from March to September. Stems perennial, branched, floating, black, varying in length according to the strength of the current; hence we presume Mr. Dickson's *H. prolixum* (*Dill. t.* 38. *f.* 32 and *t.* 85. *f.* 20), to be a lengthened variety, and Dr. Abbot's *rotundifolium*, which is certainly not Scopoli's, to be a shorter one than usual. The leaves are of a very dark green, at least the older ones, loosely imbricated, scarcely two-ranked, though the affinity of this species to *H. riparium* (which we hope to figure hereafter) causes it to be ranged among such as have leaves so disposed. The form of the leaves is ovate, broad, acute, with one nerve, which scarcely attains the summit. Fruit-stalks few, bright purple, about an inch high. Capsule ovate, obtuse, short, a little drooping. Lid with a convex base, and long awl-shaped curved point.

H. riparium has long-pointed entire leaves, and its capsules a short conical lid.



Feb 1. 1809. Published by J. Sowerby, London.

ULVA pavonia.

Turkey-feather Laver.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Frond membranous, flat, kidney-shaped, with a taper base. Seeds in transverse arched lines.

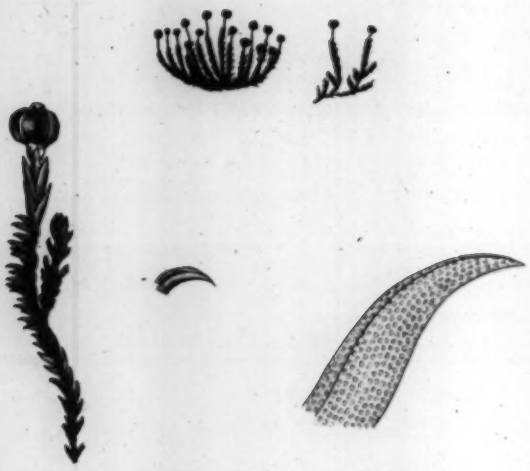
SYN. Ulva pavonia. *Linn. Syst. Nat. ed.* 12. *v.* 2. 719. *Huds.* 566. *With. v.* 4. 121. *Hull.* 311. *Lightf.* 966.

Fucus maritimus, gallo pavonis pennas referens. *Raii Syn.* 43. *Ellis's Corallines* 88. *t.* 33.

FOUND on submarine rocks and stones, chiefly on the southern coast of England, though it has been seen in Scotland. Our specimens were gathered at Weymouth by Mr. Bryer and Mr. Pilkington. We have received others from the harbour of Cadiz, where it is more plentiful than in England, by favour of Don Simon de Roxas Clemente, a learned Spaniard now travelling in the north of Africa in the dress and character of a Moor.

Several fronds grow from one central root, spreading circularly, of a kidney shape, undivided or lobed, of a membranous texture and light greenish brown colour. The seeds are thickly lodged in several brown arched lines, which run quite across each frond, and give the whole an elegantly striped appearance, justly compared to the feather of a turkey-cock.

Mr. Ellis has published a figure and description of this plant in his work on Corallines, not as believing it one of that tribe, but to shew its appearance under a microscope. His figure accords with what Mr. J. Sowerby has observed.



Feb 1 1904. Published by Tal Sowerby Londn

ANDRÆA rupestris.

Dusky Rock Andræa.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* very short. *Fringe* simple, of 4 incurved teeth, cohering at their tips, and bearing the *lid* and *veil.*

SPEC. CHAR. Leaves lanceolate, keeled, sickle-shaped, leaning one way.

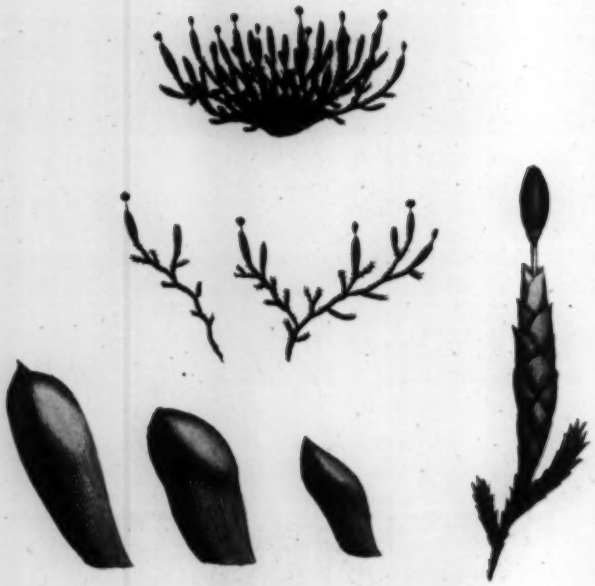
SYN. Andræa rupestris. *Sm. Fl. Brit.* 1178.

Jungermannia rupestris. *Linn. Sp. Pl.* 1601. *Huds.* 516. *With.* 882. *Hull.* 281. *Lightf.* 787. *Dicks. H. Sicc. fasc.* 7. 23.

Lichenastrum alpinum nigricans, foliis capillaceis reflexis. *Dill. Musc.* 507. *t.* 73. *f.* 40.

THE late Mr. Ehrhart of Hanover, one of the most industrious and correct botanists, and an ardent pupil of Linnæus, first separated this genus from *Jungermannia*, and removed it, with unquestionable propriety, to the true mosses. He was one of the first who understood the real genera of this tribe; and being entrusted with the printing of Linnæus's *Supplementum*, he had introduced some of his principles into that work; but the younger Linnæus, not having studied the subject, with misplaced indignation cancelled the sheet.

This plant grows on moist alpine rocks. We received it from Mr. Robson. It is perennial, bearing fruit in the spring and summer. The stems are half an inch high, branched, leafy, forming tufts. Leaves dull green or blackish, imbricated, curved to one side, acute, keeled, sickle-shaped, entire, without any nerve. Stalks terminal, solitary, short, pale brown, clothed with larger, closely imbricated, leaves. Capsule erect, whitish, small and shallow. Fringe of 4 very large, lanceolate, incurved, brown teeth, cohering at their points, and originally tipped with the lid and veil, see our next plate.



Feb. 1. 1804. Published by Jas. Sowerby, London.

ANDRÆA alpina.

Chocolate Alpine Andræa.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* very short. *Fringe* simple, of 4 incurved teeth, cohering at their tips, and bearing the *lid* and *veil.*

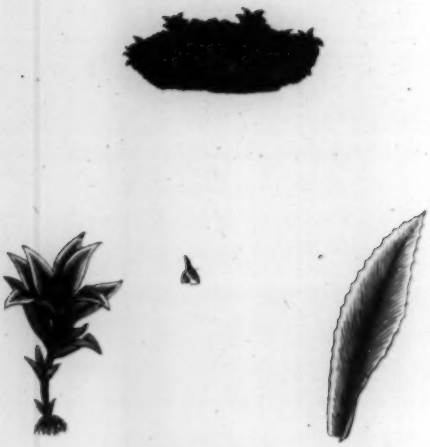
SPEC. CHAR. Leaves ovate, concave, imbricated every way.

SYN. Andræa alpina. *Sm. Fl. Brit.* 1179.
Andreæa alpina. *Hedw. Sp. Musc.* 49.
A. rupestris. *Hedw. Sp. Musc.* 47. *t.* 7. *f.* 2?
A. petrophila. *Ehrh. Crypt.* 67. *Beitr. v.* 1. 180. and 192.
Jungermannia alpina. *Linn. Sp. Pl.* 1601. *Huds.* 517. *With.* 882. *Hull.* 281. *Lightf.* 787. *Dicks. H. Sicc. fasc.* 3. 23.
Lichenastrum alpinum atro-rubens teres, calycibus squamosis. *Dill. Musc.* 506. *t.* 73. *f.* 39.

THIS is found like the last in the crevices of Alpine rocks. It agrees with that in size and habit, but is more invariably of a very dark brown colour approaching to black. It is also essentially distinguished by the leaves being concave, not keeled nor sickle shaped, and closely imbricated every way, never in any degree curved to one side. Those which invest the fruit-stalk are blunt with a little point. The capsule is brown, teeth purplish black, crowned with the withered veil and lid.

Mr. Turner first suggested to us that Hedwig seems to have figured and described this for the *rupestris.* We did indeed find his figure and description incorrect, but dare not suspect such a mistake.

The place of the *Andræa* is before *Tetraphis* in the natural arrangement. Ehrhart named it after Mr. Andrea an apothecary of Hanover. We think one *e* out of his *Andreæa* may be well spared.



March 1. 1804. Published by Tho. Conrady, London.

PHASCUM patens.

Spreading Earth-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

SPEC. CHAR. Stem short. Capsule globular. Leaves lanceolate, spreading, serrated towards the top.

SYN. Phascum patens. *Hedw. Sp. Musc.* 20. *Crypt. v.* 1. 28. *t.* 10. *Sm. Fl. Brit.* 1150. *Roth. Germ. v.* 3. 112. *Dicks. Crypt. fasc.* 4. 2.

β. P. recurvifolium. *Dicks. Crypt. fasc.* 4. 1. *t.* 10. *f.* 2.

SPECIMENS of this little moss have been sent us by Mr. Templeton from Ireland. They were found in August 1800, in a dry drain. It has already been observed in England, on a clay soil in shady places.

The plants grow together in great numbers, but not closely crowded, forming a beautifully verdant fairy turf. Root annual. Stem erect, very short, red, most leafy at the top. Leaves very much spreading, and more or less recurved, various in breadth, lanceolate, acute, beardless, of a light shining green, furnished with a single rib, serrated, especially towards the extremity. Fruit-stalk terminal, short, straight, sheathed at the base. Capsule erect, globular, brown, with a pale tip. Veil brown, sharp-pointed.

The variety β, according to Mr. Turner, differs merely in having more recurved leaves, which are broadest in their upper part and contracted from thence to the base.

March 1. 1800. Published by Jas Sowerby, London.

PHASCUM bryoides.

Tall Earth-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

SPEC. CHAR. Stem simple. Leaves ovate, hair-pointed, upright. Capsule elliptical, beaked. Fruit-stalk erect, straight.

SYN. Phascum bryoides. *Dicks. Crypt. fasc.* 4. 3. *t.* 10. *f.* 3. *Sm. Fl. Brit.* 1154.

FOR this singular *Phascum*, whose long stalk gives it so much the appearance of a *Bryum*, we are obliged to the Rev. Dr. Abbot, who found it at Clapham springs, Bedfordshire. Mr. Dickson mentions "heaths and woods" as its natural places of growth, without specifying any particular spot. It is annual, ripening its fruit in the spring.

This is one of the largest species of the genus. The root consists of numerous fibres. Stem erect, various in length, simple, leafy. Leaves imbricated, very little spreading, lanceolate or inclining to ovate, entire, tipped with a bristle, and keeled with a strong nerve. Stalk terminal, upright and firm, reddish, exceeding the stem in length. Capsule erect, brown, smooth, of a broadish elliptical figure, tipped with a lighter-coloured, tapering, rather inclined, lid, which does not fall off, but the seeds escape from the capsule by its decaying or being accidentally torn. Veil tapering, pale.

March 2. 1804. Published by Jas Sowerby, London.

ENCALYPTA Daviesii.

Least Extinguisher-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical. *Fringe* of 16 linear upright teeth. *Veil* campanulate, inflated, wide.

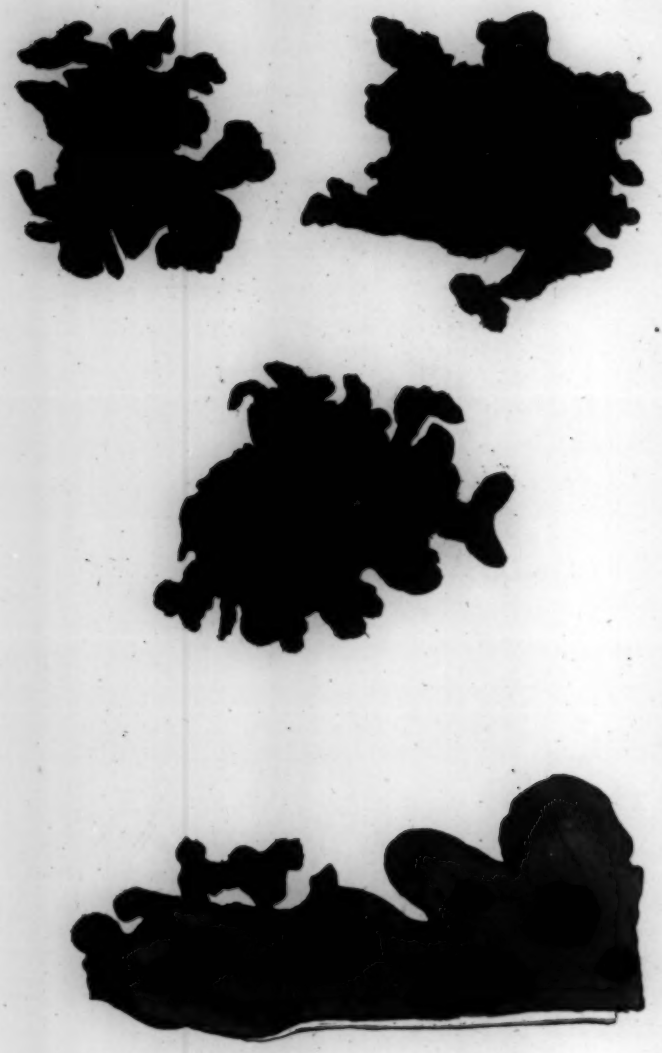
SPEC. CHAR. Veil furrowed, torn in the margin. Stem branched. Leaves awl-shaped.

SYN. Encalypta Daviesii. *Sm. Fl. Brit.* 1183.
Bryum Daviesii. *Dicks. Crypt. fasc.* 3. *t.* 7. *f.* 6. *With.* 835. *Hull.* 264.

FOREIGN botanists have not yet noticed this moss, the specific name of which was given by Mr. Dickson in honour of its original discoverer the Rev. Hugh Davies, who found it in Anglesea. Mr. R. Brown, now on a botanical expedition to New Holland, favoured us with specimens from the North of Ireland, having observed it on the rocks at Fairhead, and particularly on the fallen columns of the Giant's Causeway, growing in great abundance. It is perennial, but we are not informed of the precise time of its fructification.

The stems are branched, leafy, and grow in dense tufts half an inch or somewhat more in height. Leaves crowded, awl-shaped, keeled, entire, dark-green, curled inward by drying. Stalks terminal, erect, solitary, short, tawny, sheathed at the base. Capsule cylindrical inclining to ovate, short and abrupt. Lid convex, with a tapering straight point. Fringe short, inclining inwards. Veil yellow, shining, furrowed lengthwise, tipped with brown, and at length torn at the base.

It is not without great diffidence that we refer this plant to *Encalypta* rather than to *Grimmia*; but the linear teeth, and especially the inflated veil, have determined us. See the most common species of this genus in *vol.* 8. *t.* 558.



March 1. 1804. Published by Jas. Sowerby, London.

LICHEN polyphyllus.

Many-leaved Smooth Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

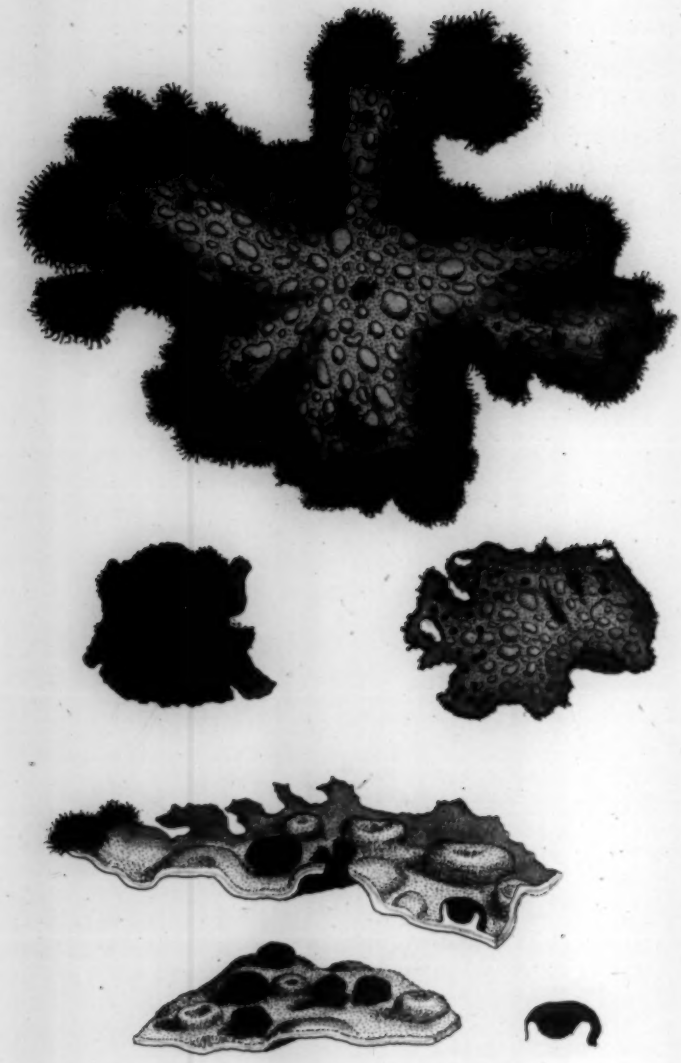
SPEC. CHAR. Umbilicated, membranous, many-lobed, olive-black; naked and very smooth on both sides. Tubercles convex, irregularly plaited.

SYN. Lichen polyphyllus. *Linn. Sp. Pl.* 1618. *Huds.* 551. *With. v.* 4. 65. *Hull.* 302. *Lightf.* 863. *Ehrh. Crypt.* 99.
L. glaber. *Ach. Prod.* 144.
Umbilicaria polyphylla. *Schrad. Spicil.* 102. *Hoffm. Pl. Lich. t.* 59. *f.* 2.
Gyrophora glabra. *Ach. Meth.* 101.
Lichenoides tenue pullum, foliis utrinque glabris. *Dill. Musc.* 225. *t.* 30. *f.* 129.

No specimens of this Lichen in fructification had ever been found in Britain, till it was observed in that state near Newcastle by Mr. Thornhill, and obligingly communicated to us, in great perfection, by Mr. Winch. We cannot but expect much from a place capable of producing so great a curiosity. The plant itself occurs chiefly on the granite mountains of Scotland and Wales, and is not common.

The root is strong and central. Frond many-lobed, often so deeply as to seem formed of many leaves, membranous, rigid, quite smooth all over, black beneath, somewhat lighter, with an olive hue, above. Tubercles nearly sessile, convex, black (as in all this tribe), their surface formed of angular plaits, or of several separate rolls, or rather folds, not one regular concentric roll.

We lament the necessity of retaining the old Linnæan name of this species, which indeed seems to us a very good one, because we are sorry not to follow in every thing so great a botanist and so worthy a man as Dr. Acharius; but we rely on his candour for the present, and posterity must decide between us in the end.



March 1. 1804. Published by Jas Sowerby, London.

LICHEN pustulatus.

Blistered Lichen.

CRYPTOGAMIA Algæ.

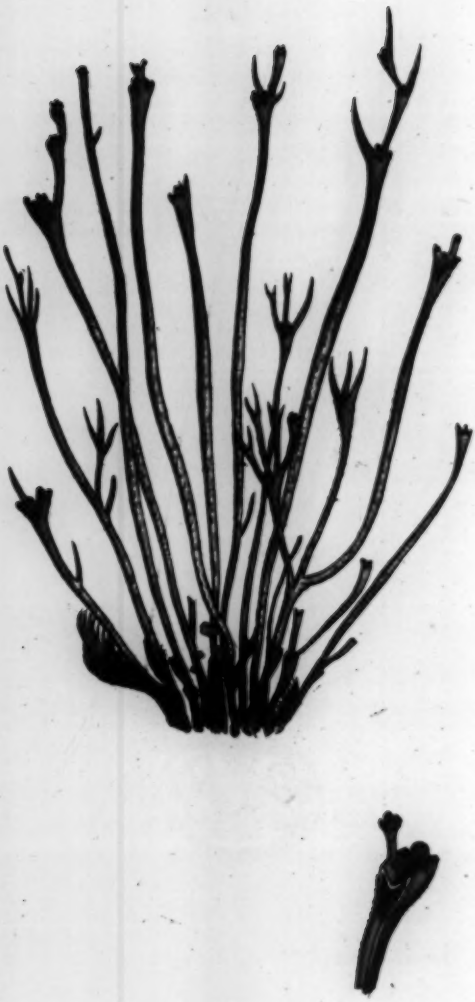
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Umbilicated, membranous, lobed, blistered and warty, greenish ash-coloured; beneath dark-olive, deeply pitted. Shields flat, at length plaited.

SYN. Lichen pustulatus. *Linn. Sp. Pl.* 1617. *Ach. Prod.* 146. *Huds.* 549. *With. v.* 4. 64. *Hull.* 302. *Lightf.* 858. *Ehrh. Crypt.* 79.
Umbilicaria pustulata. *Schrad. Spicil.* 102. *Hoffm. Pl. Lich. t.* 28. *f.* 1, 2. *t.* 29. *f.* 4.
Lecidea pustulata. *Ach. Meth.* 85.
Lichenoides pustulatum cinereum et veluti ambustum. *Dill. Musc.* 226. *t.* 30. *f.* 131.

VARIOUS of our often-mentioned friends have sent us this beautiful and remarkable Lichen from Wales and Scotland, where, as well as in the north of England, it grows on granite rocks; but the fructification is so extremely rare, that, to shew it more perfectly, we have at *fig.* 1. delineated a Spanish specimen sent by Don Simon de Roxas Clemente, an excellent naturalist, now engaged in a hazardous journey among the Moors. At *fig.* 2. is a Scotch specimen found by Mr. Menzies, showing the more advanced state of the shields, when they evidently assume the rugged or plaited configuration of the other umbilicated Lichens, as was suspected by the excellent Schrader. This confirms the genus of *Umbilicaria*, a genus which will probably be one day generally adopted.

This species widely differs from all others of European growth in its curiously blistered appearance. The branched black warts are also remarkable. The fructifications moreover are bordered, being true shields, with a disk, at first flat and even, afterwards either marked with an inner circle and a central perforation, or with angular plaits.



March 2. 1804. Published by Jas. Sowerby, London.

LICHEN gracilis.

Slender Cup Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Cup-shaped, long, slender, smooth, cartilaginous, greenish brown, at length somewhat branched. Cups conical, sharply toothed. Tubercles brown. Leaves minute.

SYN. Lichen gracilis. *Linn. Sp. Pl.* 1619. *Ach. Prod.* 191. *With. v.* 4. 37. *Hull.* 303. *Lightf.* 873.

L. pyxidatus ϖ. *Huds.* 555.

Bæomyces gracilis. *Ach. Meth.* 344.

Coralloides scyphiforme serratum elatius, caulibus gracilibus glabris. *Dill. Musc.* 88. *t.* 14. *f.* 13.

TO determine the species among the Cup-bearing Lichens is one of the most difficult problems in botany. Mr. Hudson cuts the Gordian knot by uniting them all into one, but surely nothing can be more rash. On the other hand, it may perhaps be allowed that other botanists have subdivided them beyond the limits of Nature. If any of them be distinct species, that in our plate is one. It grows in mountainous heathy or dry woody places, nor is it in the northern counties unfrequent, bearing fruit at all seasons.

The leaves, which form a kind of crust, are minute, lobed and crenate. Stems round, hollow, long and slender, mostly very smooth, olive-coloured, brown upwards, when barren sharp-pointed, but generally terminating in small, conical, brown cups, sharply and irregularly toothed at their edges, and there studded with little, round, smooth, chesnut-coloured tubercles. The margins of these cups are at length proliferous, and sometimes the main stem itself is divided.

March 1. 1804. Published by Jas. Sowerby, London.

POTAMOGETON heterophyllum.

Various-leaved Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Leaves under water membranous, linear-lanceolate, and sessile; floating ones coriaceous, elliptical, on footstalks. Flower-stalks swelling.

SYN. Potamogeton heterophyllum. *Schreb. Lips.* 21. *Hoffm. Germ. ann.* 1800. 81. *Willden. Sp. Pl. v.* 1. 713. *Sm. Fl. Brit.* 1390.

P. palustre. *Teesdale Tr. of L. Soc. v.* 5. 43. *Relh.* 64.

P. gramineum. *Lightf.* 123. *Fl. Dan. t.* 222; without the floating leaves.

WE received this *Potamogeton* from Mr. Teesdale and the Rev. Mr. Hemsted several years ago, but have long been in doubt about it. A collection of fine specimens, in various states, sent from Shropshire by the Rev. Mr. Williams, have enabled us better to understand it, and to refer it without any hesitation to the *heterophyllum* of Schreber. That great author never saw the flowers. With us they are produced from July to September. The plant seems not to be uncommon in pools and ditches throughout England, but has generally been mistaken, before its floating leaves appear, which is often not till late in autumn, for *P. gramineum*, because botanists have relied on the name in *Fl. Danica*. Mr. Turner found this plant at Old Buckenham, Norfolk.

The roots are perennial, creeping in the mud. Stems branched. Most of the leaves under water membranous, lanceolate or linear, sessile; the rest floating, leathery in texture, on footstalks, elliptical, entire, various in size and breadth. Stipulæ and bracteæ large, concave, sheathing. Flower-stalks swelling upwards, contracted under the spike, and often curved. The upper leaves resemble those of *P. natans*, the only species at all akin to this; but the flower-stalk, and lower leaves, sufficiently distinguish them.

POTAMOGETON heterophyllum.
Various-leaved Pond-weed.

TETRANDRIA Tetragynia.

Gen. Char. Cal. none. Petals 4. Seeds 4.
Spec. Char. Leaves under water membranous, linear-lanceolate, and sessile; floating ones coriaceous, elliptical, on footstalks. Flower-stalks swelling.
Syn. Potamogeton heterophyllum. Schreb. Lips. 91.
Willd. Germ. cum. 1800. 81. *With.* 5th Pl. v. 1. 128. *Sm.* Fl. Brit. 1390.
P. pulsatre. *Tenedos* Tr. of L. Soc. v. 3. 48. *Relh.* 64.
P. pyriminum. *Schkuh.* 1. 95. *Fl. Dan.* t. 222; with out the floating leaves.

WE received this Plant agreeable from Mr. Teesdale and the Rev. Mr. Hensted several years ago, but have long been in doubt about it. A collection of fine specimens, in various states, sent from Shropshire by the Rev. Mr. Williams, have enabled us better to understand it, and to refer it without any hesitation to the *heterophyllum* of Schreber. That great author never saw the flowers. With us they are produced from July to September. The plant seems not to be uncommon in pools and ditches throughout England, but has generally been mistaken, before its floating leaves appear, which is often not till late in autumn, for *P. gramineus*, because botanists have relied on the name in *Fl. Dan.* Mr. Turner found this plant at Old Buckenham, Norfolk.

The roots are perennial, creeping in the mud. Stems branched, or linear, sessile; the rest floating, leathery in texture, on footstalks, elliptical, entire, various in size and breadth. Stipules sheathing, pointed under the eyes, and often curved. The upper leaves resemble those of *P. natans*, the only species at all akin to this; but the flower-stalk, and lower leaves, sufficiently distinguish them.

March 1 1804. Published by Jas. Sowerby, London.

POTAMOGETON fluitans.

Long-leaved Floating Pond-weed.

TETRANDRIA Tetragynia.

GEN. CHAR. *Cal.* none. *Petals* 4. *Style* none. *Seeds* 4.

SPEC. CHAR. Lower leaves lanceolate, pointed and membranous; upper elliptic-lanceolate, somewhat coriaceous: all on footstalks.

SYN. Potamogeton fluitans. *Roth. Germ. v.* 1. 72. *v.* 2. 202. *Hoffm. Germ. ann.* 1800. 81. *Willden. Sp. Pl. v.* 1. 713. *Sm. Fl. Brit.* 1391.

ANOTHER new *Potamogeton* is here added to the British Flora. This has been found in the river at Scole, Norfolk, by Mr. Woodward and Mr. Turner; in ditches in the marshes near Beverley, by Mr. Teesdale; and in Lilleshall Mill-pool, Shropshire, by the Rev. Mr. Williams. It is, like others of its genus, perennial, flowering in August and September.

Writers who have described this on the continent consider it as allied to *P. natans;* we think it more approaches *P. lucens, v.* 6. *t.* 376.

Its leaves are much more coriaceous than those of the *lucens,* in which respect it more agrees with *natans;* particularly the upper leaves, which float on the water, and are somewhat elliptical, with very considerable footstalks: the lower are membranous, more lanceolate, acute, tapering down into less evident footstalks. Flower-stalks axillary, from various parts of the stem, solitary, long, but little swelling. Spike reddish. The whole plant is remarkable for a reddish hue, especially in the upper part.

POTAMOGETON *fluitans*.

Long-leaved floating Pond-weed.

TETRANDRIA Tetragynia.

Gen. Char. Cal. none. Petals 4. Style none. Seeds 4.

Spec. Char. Lower leaves lanceolate, pointed and membranous; upper elliptic-lanceolate, somewhat coriaceous: all on footstalks.

Syn. Potamogeton fluitans. Roth. Germ. v. 1. 72. n. 2.

202. Hoffm. Germ. enum. 1800. 81. Willden. Sp. Pl. v. 1. 713. Sm. Fl. Brit. 1891.

ANOTHER new Potamogeton is here added to the British flora. This has been found in the river at Scole, Norfolk, by Mr. Woodward and Mr. Turner; in ditches in the marshes near Beverley, by Mr. Teesdale; and in Lillieshall Mill-pool, Shropshire, by the Rev. Mr. Williams. It is, like others of its genus, perennial, flowering in August and September.

Writers who have described this on the continent consider it as allied to *P. natans*; we think it more approaches *P. lanceolatum*, v. 6. t. 378.

Its leaves are much more coriaceous than those of the *lucens*, in which respect it more agrees with *natans*; particularly the upper leaves, which float on the water, and are somewhat elliptical, with very considerable footstalks: the lower are membranous, more lanceolate, acute, tapering down into less evident footstalks. Flower-stalks axillary, from various parts of the stem, solitary, long, but little swelling. Spike reddish. The whole plant is remarkable for a reddish hue, especially in the upper part.

March 1. 1804. Published by Jas. Sowerby. London.

VIOLA tricolor.

Pansy Violet, or Heart's-ease.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* 5-leaved, lengthened out at the base. *Pet.* 5, irregular; the lowermost spurred behind. *Antheræ* slightly cohering. *Caps.* superior, of 1 cell, with 3 valves.

SPEC. CHAR. Stem angular, spreading. Leaves oblong, deeply crenate. Stipulæ lyrate, pinnatifid.

SYN. Viola tricolor. *Linn. Sp. Pl.* 1326. *Sm. Fl. Brit.* 248. *Huds.* 380. *With.* 262. *Hull.* 191. *Relh.* 89. *Abbot.* 190. *Curt. Lond. fasc.* 1. *t.* 65. *Woodv. Suppl. t.* 252. *Raii Syn.* 365.

β. V. arvensis. *Sibth.* 84.

V. bicolor arvensis. *Raii Syn.* 366.

THE Wild Heart's-ease, the origin of all our annual garden ones, is very common in corn-fields, more particularly on a dry or gravelly soil, and varies so much in the size and colour of its flowers, in the field as well as the garden, that we cannot agree with those authors, however ingenious, who divide it into two species, especially as the hairiness of the calyx proves very uncertain.

It is annual, and flowers from May to September. Root fibrous, small. Stem branched, weak and spreading, leafy, angular, downy. Leaves alternate, on long stalks, ovate-oblong, more or less deeply notched or toothed, various in hairiness. Stipulæ pinnatifid, with a large, ovate, terminal, crenate lobe. Flowers on long axillary stalks, solitary, with very minute bracteæ. Petals generally longer than the calyx, variegated in colour, the lowermost generally yellow, the 2 upper ones most purple.

We believe this completes our history of British *Violæ*, except the *amœna*, described in Mr. Symons's *Synopsis*. That species we have never been able to ascertain, the specimens we have seen not appearing to be distinct from *V. lutea*; but we shall endeavour to learn more on the subject.

March 1. 1830. Published by Sir J. Smith & Sowerby London.

DATURA Stramonium.

Common Thorn-apple.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* funnel-shaped, plaited. *Cal.* tubular, angular, deciduous. *Capsule* superior, of 2 cells and 4 valves.

SPEC. CHAR. Fruit spinous, ovate, erect. Leaves ovate, smooth.

SYN. Datura Stramonium. *Linn. Sp. Pl.* 255. *Sm. Fl. Brit.* 254. *Huds.* 92. *With.* 251. *Hull.* 51. *Relh.* 90. *Curt. Lond. fasc.* 6. *t.* 17.

Solanum pomo spinoso oblongo, flore calathoide, Stramonium vulgò dictum. *Raii Syn.* 266.

LIKE the Borage, and a few other plants that thrive on dunghills, the Thorn-apple, though originally exotic, is now naturalized amongst us. It often occurs about London, and wherever there are any curious gardens in the neighbourhood. Mr. Curtis observes that it is sure to spring up from American earth. When once introduced into a garden, it comes up every year like the Great Persicaria.

As an ornamental plant it has not much to recommend it, though the flowers have a very sweet smell; but its whole habit is rank and cumbersome, and its narcotic dangerous qualities make it still less desirable.

The root is annual. Herb smooth, fœtid, about two or three feet high, flowering from July to October. Stem much branched, forked, spreading. Leaves from the forks of the stem, which seems rather peculiar to the plants called *lurid*, on foot-stalks, ovate, acute, sinuated, unequal at their base. Flowers axillary, solitary, on short stalks, upright, white. Calyx smooth, breaking off above the base. Fruit ovate, with 4 furrows, very spinous, of 2 cells when ripe, each containing many black rugged seeds on a double receptacle.

March. 1. 1814. Published by Jas. Sowerby, London.

RIBES rubrum.

Common Currant.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Clusters smooth, pendulous. Flowers but little concave. Petals obtuse.

SYN. Ribes rubrum. *Linn. Sp. Pl.* 290. *Sm. Fl. Brit.* 263. *Huds.* 99. *With.* 264. *Hull.* 54. *Relh.* 96. *Sibth.* 84. *Lightf.* 146. *Woodv. Med. Bot. t.* 74.

R. vulgaris, fructu rubro. *Raii Syn.* 456.

A NATIVE of the mountainous parts of Durham and the north of Yorkshire, about the banks of rivers. Mr. Robson and Mr. W. Brunton have furnished us with wild specimens of the leaves and flowers, but the berries we could never obtain (except from gardens), the birds feeding on them before they are ripe.

The value of this shrub, when cultivated for its fruit, is sufficiently well known. The white and pale red are preferred for their sweetness, the full red, or wild kind, for its grateful acid. The Currant is quite the fruit of a cold climate, thriving very ill in the south of Europe. The flowers are out in May; the fruit ripens in July.

This is a bushy shrub, with smooth and unarmed branches. Leaves deciduous, on long footstalks, five-lobed, doubly-serrated, most downy beneath. Clusters simple, at all times pendulous. Bracteæ solitary, ovate, concave, small, smooth, very much shorter than the partial flower-stalks. Sometimes there are a pair of other small bracteæ under each flower, but not so constant nor conspicuous as in *R. petræum*, *t.* 705. Flowers cupshaped, nearly flat, yellowish green. Petals obtuse, or inversely heartshaped. Berries globular, smooth, red and shining.

March 1. 1804. Published by Jas Sowerby, London.

RIBES spicatum.

Acid Mountain Currant.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Spikes erect. Flowers nearly sessile. Petals oblong. Bracteæ shorter than the flowers.

SYN. Ribes spicatum. *Robson in Tr. of Linn. Soc. v.* 3. 240. *t.* 21. *Sm. Fl. Brit.* 264. *With.* 265. *Hull.* 54. *Sym. Syn.* 62.

A MORE particular inquiry, since page 705 was written, has convinced me of the distinction between this plant and *R. petræum*, which consists in the clusters being always erect, both in flower and fruit, and in the extreme shortness of the partial flower- and fruit-stalks. Hence the clusters are more properly denominated spikes. Mr. Robson, to whom we are obliged for wild specimens, is the only discoverer of this species. He found it near Richmond in Yorkshire, and between Piersbridge and Gainford in Durham, flowering in May; and his account, with a plate annexed, is published in the Linnean Society's 3d volume of Transactions.

Its leaves resemble *R. rubrum*, see last page, except in being generally more downy beneath, and more sharply serrated. The erect spikes, however, and nearly sessile flowers, are abundantly sufficient to distinguish it from that species. The flowers are of a dull brownish green. Petals oblong. Bracteæ very small and recurved, about as long as the little partial stalks. No other bracteæ are to be found. Berries red and acid, like the foregoing.

We should recommend this for cultivation, as there is no guessing what advantages a new species, or even variety, of Currant might possess.

RIBES spicatum.

Acid Mountain Currant.

GEN. CHAR. Cal. superior, bell-shaped, double, bearing the petals and stamens. Berry clothed. Berry with many seeds.

SPEC. CHAR. No thorns. Spikes erect. Flowers nearly sessile. Petals oblong. Stamens shorter than the flowers.

SYN. Ribes spicatum. *Robson's Voy. of Discov. &c. p. 8. 1821. Sm. Fl. Brit. 294. Willd. 265. Hall. Sp. Syn. &c.*

A MORE particular inquiry, since page 703 was written, has convinced me of the distinction between this plant and *R. prostratum*, which consists in the closure existing always erect, both in flower and fruit, and in the extreme shortness of the partial flower-and fruit-stalks. These differences are more properly denominated spikes. Mr. Robson, to whom we are obliged for this species, is the only discoverer of it as a native of Britain. It is found in Richmond in Yorkshire, and between Pershbridge and Lancaster in Durham, flowering in May; and his account, with a plate annexed, is published in the Linnean Society's 3d volume of Transactions.

Its leaves resemble *R. rubrum*, see last page, except in being generally more downy beneath, and more sharply serrated. The erect calices, however, and nearly sessile flowers, are abundantly sufficient to distinguish it from that species. The flowers are of a dull brownish green. Petals oblong. Filaments very small and reversed, about as long as the little partial stalks. No other branches are to be found. Berries red and acid, like the foregoing.

We should recommend this for cultivation, as there is no guessing what advantages a new species, or even variety, of Currant might possess.

April 1. 1804. Published by Jas Sowerby, London.

RIBES nigrum.

Black Currant.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Clusters hairy, pendulous, with a simple flower-stalk at their base. Flowers oblong.

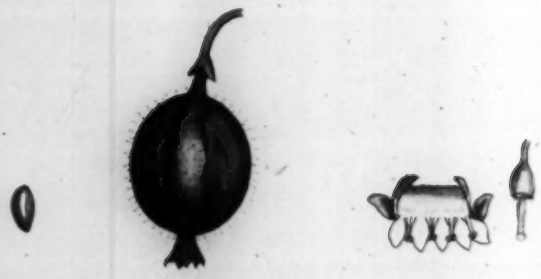
SYN. Ribes nigrum. *Linn. Sp. Pl.* 291. *Sm. Fl. Brit.* 265. *Huds.* 99. *With.* 265. *Hull.* 54. *Lightf.* 146. *Relh.* 96. *Abbot.* 53. *Woodv. Med. Bot. t.* 75. *Fl. Dan. t.* 556.

R. nigrum vulgò dictum, folio olente. *Raii Syn.* 456.

BLACK CURRANTS, scarcely less commonly, though less copiously, cultivated than the red or white, are most decidedly wild in many parts of Britain. They naturally grow in swamps, and about the banks of rivers. In unfrequented marshy spots about the Norwich river we have several times met with them, or at least with the shrub, for the fruit is speedily devoured by birds. Our specimen of the flowers was sent by Mr. Robson. The fruit came from a garden.

This species flowers in May, like the others, and ripens its berries in July. It is easily known by its more humble growth, and softer, somewhat larger, leaves, remarkable for their strong smell, approaching the scent of Savine, *Juniperus Sabina*. Many persons are fond of this smell, of which flavour the fruit so much partakes, as to be, to some people, disagreeable. In a preserved state it is highly grateful, and generally approved, being a popular and efficacious remedy for sore throats, or any irritation about the mouth. The odoriferous matter exudes from glandular hairs, scattered over the leaves and flower-stalks. The calyx is more tubular than in the species we have already described; the fruit larger, and black. Each cluster is remarkable for having a solitary simple flower-stalk at its base.

Dr. Withering has observed a very curious change of the petals of this plant into stamina.



April 1 1804. Published by Jas Sowerby, London.

RIBES Grossularia.

Rough Gooseberry.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

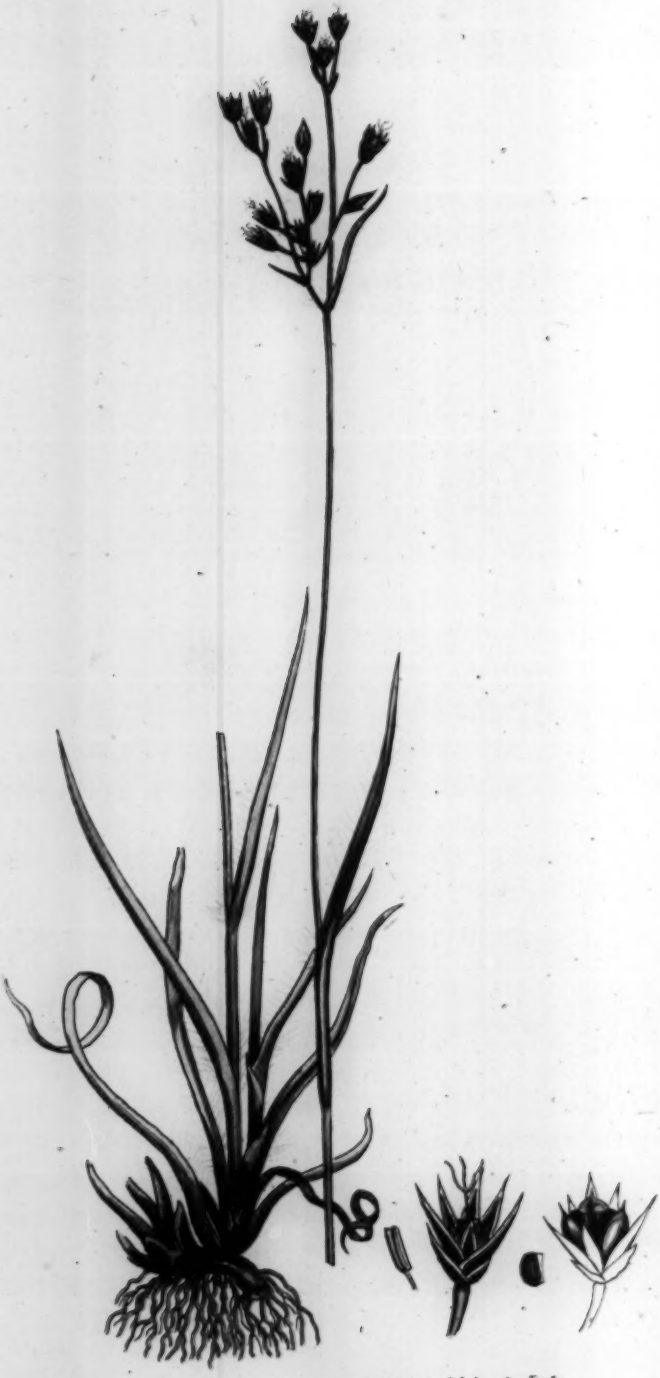
SPEC. CHAR. Branches prickly. Footstalks hairy. Flower-stalks single-flowered. Bracteæ distinct. Fruit hairy.

SYN. Ribes Grossularia. *Linn. Sp. Pl.* 291. *Sm. Fl. Brit.* 266. *With.* 266. *Hull.* 54. *Sym. Syn.* 62.

NOTHING can be more difficult than to say whether this plant be truly an original native of Britain. It is however so far naturalized as to be common in hedges and waste ground, and on old buildings. Mr. Robson finds it plentifully in woods and hedges about Darlington, which may be its native country. It flowers in April, and ripens its fruit in July.

It forms a low bushy shrub, whose branches are armed with one, two, or three strong spreading prickles under each bud. Leaves smaller, rounder, and more smooth and shining than in the currant, each three-lobed and cut, standing on hairy footstalks, various in length. Flower-stalks simple, drooping, bearing one flower, and a pair of separate, opposite, ovate, fringed bracteæ a little below it. Germen downy. Calyx tubular. Petals elliptical or ovate, brownish or pale green. Berry rather elliptical, hairy, generally green or yellowish. In a garden, as every body knows, it is liable to many variations of colour, size and flavour. It is one of the most wholesome of fruits, which the inhabitants of tropical countries would gladly purchase with some of their more luscious productions. It is observable of the cultivated varieties, that what is gained in size is lost in flavour.

The Smooth Gooseberry, *R. Uva crispa*, is as frequent as the above, and perhaps only a variety of it.



April 1. 1804. Published by Jas. Sowerby, London.

JUNCUS Forsteri.

Narrow-leaved Hairy Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves flat, hairy. Panicle cymose, erect. Flowers solitary. Capsules sharp-pointed.

SYN. Juncus Forsteri. *Sm. Fl. Brit.* 1395.

MR. EDWARD FORSTER first observed this *Juncus* in 1795, growing intermixed with *J. pilosus*, under trees between Hoghill and Collier-row in Hainhault forest, Essex. Several years' attention to it, both wild and cultivated, have convinced him of its being really a distinct species, and we readily assent to his opinion. We have moreover gathered it in the woods at Hafod, Cardiganshire, growing among the common *J. pilosus*, and flowering in May; but were not aware of its distinctions till Mr. Forster pointed them out.

The root is perennial, blackish, fibrous, scarcely creeping. Stems 8 to 12 inches high, erect, simple, slender, round, polished, leafy. Leaves linear-lanceolate, acute, not half so broad as in *J. pilosus*, hairy, as in that species, at their margin towards the base; those which grow on the stem are larger than the radical ones, which is not the case in the species just mentioned. Panicle terminal, cymose, compound; all the branches nearly upright, by no means divaricated or bent backward like *t.* 736. Calyx-leaves much more pointed than in that species. The capsule also is acute, not obtuse, and terminates in a longish beak. Seeds 1 in each cell.

April 1 1804. Published by Jas. Sowerby, London.

CAREX flava.

Yellow Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths short, nearly equal to the flower-stalks. Female spikes roundish. Fruit beaked, curved downwards. Stem nearly smooth.

SYN. Carex flava. *Linn. Sp. Pl.* 1384. *Sm. Fl. Brit.* 990. *Gooden. Tr. of Linn. Soc. v.* 2. 173. *Huds.* 407. *With.* 98. *Hull.* 207. *Lightf.* 551. *Relh.* 367. *Sibth.* 29. *Abbot.* 204. *Dicks. H. Sicc. fasc.* 3. 14. *Schkuhr. n.* 60. *t.* H. *f.* 36. Gramen palustre echinatum. *Raii Syn.* 421.

FREQUENT in boggy meadows, where it flowers in May and June, and may readily be discerned at a distance by its yellow hue, especially as it approaches to maturity. It varies much in height and luxuriance, according to the fertility and moisture of the soil; but the spikes preserve nearly their usual size in every variety.

Root perennial, creeping. Stem erect, generally a foot high, triangular, for the most part smooth, except about the top; leafy at the base. Leaves bright-green, erect, taller than the stem (except in some starved varieties), broadish, rough on the edges and keel, and marked also with 2 rough lines on their upper side towards the extremity, as observed by Mr. J. Sowerby. Bracteæ leafy, extending far beyond the stem, remarkably spreading, with very short sheaths. Male spike lanceolate, erect, almost always solitary. Female spikes about 3, almost globular, the lowermost only on a shortish stalk. Glumes ovate, tawny, with a green rib. Fruit longer than the glumes, spreading every way, curved downwards, ovate, beaked, triangular, ribbed, quite smooth, cloven at the point. Stigmas 3. Seed small, black, triangular.

April 1. 1804. Published by Jas. Sowerby. London.

CAREX fulva.

Tawny Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of 1 scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Sheaths long, but shorter than the flower-stalks. Female spikes ovate. Fruit beaked, straight. Stem rough.

SYN. Carex fulva. *Gooden. Tr. of Linn. Soc. v.* 2. 177. *t.* 20. *f.* 6. *v.* 3. 77. *Sm. Fl. Brit.* 991.

THIS new species was first described and figured by Dr. Goodenough, from specimens gathered in Shropshire by the Rev. Mr. Williams. Mr. Gotobed has since found it near Eton, Mr. Winch at Newcastle, and several of our friends have sent it from Scotland. It is perennial, growing in marshes, and flowering in June or July.

Root creeping. Stem erect, slender, about a foot high, triangular, the angles sharp and very rough, at least in all the upper part. Leaves upright, narrow, shorter than the stem, rough at the edges and keel, but not on the upper side. Bracteæ with longish brown-tipped sheaths, their points not rising above the stem. Male spike linear. Female ones 2, rarely 3, tawny, ovate, erect, remote, on stalks which are about half as long again as their sheaths. Glumes ovate, never awned, obscurely nerved. Fruit longer than the glumes, brownish, pointing upwards (not recurved), beaked, smooth, except at the edges of the beak, cloven at the tip. Seed yellowish brown, twice as large as in the preceding.

Some erroneous specimens led the accurate Dr. Goodenough to reduce this (*in L. Trans. v.* 3.) to a variety of *C. flava*, but we have traced the cause of this mistake. *C. fulva* is rather more akin to *distans*, *t.* 1234, but smaller, and distinguished by its rough stem, glumes without any awns, and longer-beaked rough-edged fruit.

April 2. 1804. Published by Jas. Sowerby, London.

AIRA præcox.

Early Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves slender and tapering, with angular sheaths. Panicle spike-shaped. Florets sessile, nearly naked at their base, awned at the back.

SYN. Aira præcox. *Linn. Sp. Pl.* 97. *Sm. Fl. Brit.* 87. *Huds.* 36. *With.* 137. *Hull.* 20. *Relh.* 29. *Sibth.* 39. *Abbot.* 15. *Curt. Lond. fasc.* 3. *t.* 7. *Dicks. H. Sicc. fasc.* 4. 4.

Gramen parvum præcox, paniculâ laxâ canescente. *Raii Syn.* 407. *t.* 22. *f.* 2.

COMMON on dry gravelly ground in the spring, flowering in May or early in June, and soon after withering away.

Root fibrous, annual. Stems several, 2 or 3 inches high, straight, leafy, very smooth. Leaves bristle-shaped; the radical ones short, and soon fading; the rest furnished with long, angular, ribbed, smooth, more or less inflated, sheaths. Stipula blunt. Panicle small, erect, dense, but little subdivided. Flowers upright, shining, prettily variegated with green and white. Calyx of 2 equal glumes, rough at the back. Florets both sessile, about as long as the calyx, very slightly pubescent at their base, cloven at their summits. Awn from below the middle of each outer valve, scarcely twice as long as the calyx, jointed in the middle, its lower half purple.

The general hue of this plant is a pale green, frequently tinged with purple from exposure to much light.

It is scarcely necessary to say that this trifling grass has little to recommend it to the farmer's notice. Even Mr. Curtis is silent as to its qualities.